Clinical Lecture
ON
HYPER-VENTILATION IN CERTAIN DISEASES.

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(*Concluded from page* 418.)

CASE 6. *Abdominal pain; much sweating; rigors occurring with high temperature; some enlargement of liver; hyper-ventilation; apparent recovery; relapse; death; abscess in liver; scirrhous growth.*—E. H. D——, male, aged twenty-eight, spring-roller maker, admitted Nov. 24th, 1876. Was taken ill three weeks ago with severe pain in abdomen and a rigor; drank a pint of cold water; the rigor ceased, but the pain in the abdomen got worse. He was very thirsty; could not swallow any solid food; no sickness; bowels have been confined three or four days at a time, and when any fæces passed, the stool was hard and white and in small rolls. He lives in a court where there are offensive smells from stables and fish offal. When admitted, he walked into the ward doubled up as if by pain; the left side of the abdomen was extensively dull, and the walls resisting. He was ordered three grains of calomel followed by castor oil. S. diet, beef-tea and milk.—25th: Much sweating, especially at night; no rose spots; no gurgling in right iliac fossa, but tenderness there; heart's sounds clear; no cough, but a little blackish expectoration with a little blood. Temperature at 11.30 A.M. 101·4°, at 3 P.M. 99·2°; pulse 76. Lung-sounds pretty normal; urine, sp. gr. 1028, not albuminous, deposits lithates copiously. Nitric acid three minims, spirit of chloroform six minims, water one ounce, three times a day.—27th: Pulse 96; temperature 100·4°. Chop. Bowels acted well this morning; had a severe attack of rigors at the same time, lasting twenty minutes; says he has frequently had similar chills in the mornings since he became ill; does not feel cold during the shivering fits; urine normal. Temperature 103°.—29th: Liver dulness extends considerably below ribs. Temperature 99°; pulse 88.—30th: Taking half a grain of extract of nux vomica three times a day since.—Dec. 1st: Temperature at 11 A.M. 98·4°, at 9 P.M. 103°.—2nd: Liver dulness extends four inches below ribs; no appetite; is very thirsty. Temperature 101·2°.—3rd: Temperature about 10 A.M. 103·6°; pulse 99.—4th: A stool this morning, very hard and pale; has pain in mid-back and all over abdomen; was threatened with a rigor this morning, but it passed away; area of liver dulness the same as on 2nd; great thirst; no albumen in urine nor blood by guaiacum test. Temperature at noon 103·6°; pulse 108. Right superficial circumflex ilii vein very apparent, left not; Weight (normal) 117 pounds, last winter 146 pounds, last summer 144 pounds.—6th: Had a rigor at 9.30 A.M., lasting fifteen minutes; temperature at the time 101·8°; tongue furred, brown; bowels not open. Pulse 96; temperature at noon 103·2°. At 6 P.M. he had another rigor, also for fifteen minutes; during this the temperature was 105·8°; a quarter of an hour later temperature 104·6°.—7th: Temperature at noon 100·8°; liver enlarged as before; no tenderness on pressure or percussion; urine normal.—8th: At 11 A.M. had a rigor lasting nearly half an hour. Temperature at 9.30 A.M. 96·6°; during rigor 102·2°; half an hour later 102·6°. Moved to aerated ward to-day; windows to be kept constantly open.—12th: Had a rigor on the 10th, lasting about twenty minutes. Temperature during rigor 105° at 11 A.M.; one hour before it was 98°. To-day, about 10 A.M., temperature 104°. Muscles of abdomen tense; the patient cannot relax them. Bowels very confined until this morning, when he passed a large amount of pale fæces, the first quantity very hard. Had pain in the abdomen before the evacuation, which relieved it. Pulse 120. No appetite; very thirsty. Temperature about 10 P.M. 104°.—13th: Marked tenderness on percussion over the upper part of the right rectus and epigastrium; continuous poultice to this region. No hydatid fremitus.—14th and 15th: A rigor both days.—20th: Has had very little shivering since last date until to-day at 3 P.M.—22nd: Ordered four grains of quinine twice a day.—26th: No rigors for three days; temperature 101°.—28th: Does not feel so well; has a nasty headache, and pain in the situation of the gall-bladder; tongue pale, coated, moist; pulse 93, soft, quiet; temperature 100° to-day and last night; takes his nourishment fairly. Broth diet, half a pint of ale, and four ounces of brandy.—30th: Is sitting up, dressed, before the fire. Says he feels ever so much better; but he had a strong rigor last night, and a severe one also on the 28th. The temperature at 4.30 P.M. this day was 105°, whereas in the morning it had been only 99·8°, so that it rose in a few hours 5·2° F. At 10 P.M. last night the temperature was 103·5°; this morning (30th) it is 97·8°. Enjoyed a slice of roast mutton to-day. Has lost the pain under the right ribs.—Jan. 1st, 1877: Last night the temperature was 104°; it fell to 97·6° by 10.30 A.M. to-day; went up again to 102·2° at noon; at night was 100·5°. The rigors are not followed by heat and sweating.—3rd: Temperature at 10 P.M. of the 2nd, 106°; at 10 A.M. to-day 98·2°, and at 10 P.M. 103·5°.—4th: Temperature 98·2° at 11 A.M. Abdomen rather full, but almost painless. A grain of quinine was injected subcutaneously twice a day on the 2nd and 3rd. Ordered forty grains of salicylate of soda to be taken *ad vices* six daily.—8th: Has had the mixture daily as ordered until to-day, when it was left off on account of sickness. No tenderness at all in right hypochondrium; bears firm pressure well at that part; but the whole abdomen feels full, and the walls are rather tense. Hepatic dulness extends to within an inch of umbilicus. Takes his nourishment very well indeed. Temperature has been lower the last three days, the highest registered being 102·6°.—13th: Pulse 87, quiet and weak; temperature 97·7°; no rigors for nine or ten days. Brought down yesterday from the aerated ward to the general. Highest temperature last three days 103·5°.—17th: Temperature not above 100·2° on the 14th, 15th, and 16th; at 9 A.M. to-day 99·4°. He feels well; has a wonderful appetite; no shiverings at all. Abdomen is much softer and less tense; hepatic dulness is not more than two finger breadths below ribs, and does not extend higher than the fifth space; face pallid. Ordinary diet.—18th: Temperature ran up last night, but he had no rigor, only sweated a good deal. At 9 P.M. temperature was 103°; at 9 A.M. to-day 98·2°; pulse 96, soft and weak. Ten grains of citrate of iron and quinine, ten minims of tincture of nux vomica, in an ounce of water, twice a day.—22nd: Abdominal muscles tense, especially the upper right rectus; only a little aching felt on pressure under right ribs. Pulse 108; temperature last night 101°, this morning 99·8°; tongue clean. Five minims of nitro-muriatic acid, in an ounce of water, three times a day; nitro-muriatic acid swathe.—27th: He went out for a walk yesterday, and felt very much better for it; temperature in evening 102·2°, and same this morning. Soon after he was discharged at his own request; he wished to get into the air, as it seemed to benefit him so much. He went to the asylum at Walton, but only remained there a few days. He was admitted into St. George's Hospital.—Feb. 10th: For the following record I am indebted to the kindness of Dr. Wadham and Dr. Whipham. On Feb. 2nd the pain in the back became severe, and that in the hypochondrium returned. The report on Feb. 11th states that he is much emaciated and anæmic; his skin and eyes have a pale yellow tint; there is no œdema; pain is felt at right hypochondrium, not affected by inspiration or ingestion. The liver dulness commences at sixth rib in the parasternal line; temperature on 20th was 101·1°, and never was observed higher; no rigors occurred. On the 26th the abdominal pain increased, and the abdomen became distended and tense, tender on pressure. On the 28th he became unconscious, and remained so till he died on March 2nd. On Feb. 24th the blood contained an excess of white corpuscles, thirty being seen in the field of an eighth of an inch objective.

Table of Temperatures of E. H. D.

Date. 1876.	Hour.	Deg. of temp.
Nov. 25	11.30 A.M.	101·4
	3 P.M.	99·2
26	6 A.M.	100·6
	P.M.	100
27	A.M.	100·4
29	A.M.	99·8
30	Noon	103
Dec. 1	11 A.M.	98·4
	9 P.M.	103
2	A.M.	101·2
3	A.M.	103·6
	P.M.	99
4	Noon	103·6
	P.M.	102
5	10 A.M.	101·6
	8 P.M.	103·1
6	9.30 A.M.	101·8
	Noon	103·2
	6 P.M. rigor on	105·8
	½ hour after rigor	104·6
7	9 A.M.	101·8
	Noon	100·8
	8 P.M.	104·6
8	9.30 A.M.	96·4
	11 A.M. rigor on	103·2
	½ hour after rigor	102·6
	8 P.M.	102·8
9	9.30 A.M.	99·2
	P.M.	100
10	10 A.M.	98
	11 A.M. rigor on	105
	P.M.	102·4
11	A.M.	100·6
	P.M.	101·4
12	A.M.	104·4
	P.M.	104
13	A.M.	103·4
	P.M.	102·6
14	A.M.	102
	P.M.	101·6
15	A.M.	101
	2 P.M. in rigor	106·4
16	11 A.M.	102
	11 P.M.	103·2
17	11 A.M.	99·4
	6.30 P.M.	104·8
	11 P.M.	105
18	11 A.M.	102
	11 P.M.	103
19	A.M.	102·2
	P.M.	102
20	A.M.	97·4
	3 P.M. rigor	102·2
	11 P.M.	102·6
21	11 A.M.	103·2
	11 P.M.	102
22	11 A.M.	100·4
	P.M.	103·4
23	A.M.	98
	P.M.	104·2
24	A.M.	99
	P.M.	101·8
25	A.M.	98·6
	P.M.	99·4
26	11 A.M.	99·8

Date.	Hour.	Deg. of temp.
Dec. 26	11 P.M.	101·1
27	11 A.M.	100·6
	P.M.	99·6
28	10 A.M.	99·8
	4.30 P.M. rigor on	105
29	11 A.M.	97·4
	9 P.M.	99
	10 P.M. strong rigor	103·6
30	10 A.M.	97·8
	11 P.M.	100·2
31	10 A.M.	99·4
	11 P.M. rigor on	104
1877.		
Jan. 1	10.30 A.M.	99·6
	Noon	102
	9 P.M.	100·4
2	10 A.M.	103·6
	10 P.M.	103·8
3	10 A.M.	98·4
	10 P.M.	103·6
4	11 A.M.	98·2
5	11 A.M.	99·4
	11 P.M.	98·6
6	11 A.M.	98·6
	4 P.M.	102·6
7	A.M.	99·2
	2 P.M.	101·6
8	11 A.M.	99
	11 P.M.	101·4
9	11 A.M.	100·2
	10 P.M.	103·4
10	11 A.M.	101·2
	11 P.M.	103
11	10 A.M.	101
	11 P.M.	102·2
12	A.M.	102·2
	P.M.	102·4
14	A.M.	99·8
	P.M.	100·4
15	A.M.	100·4
	8 P.M.	99·8
16	9 A.M.	99·2
	8 P.M.	100·2
17	9 A.M.	99·4
	8 P.M. not in rigor	103
18	9 A.M.	98·2
	8 P.M.	98·6
19	9 A.M.	97·4
	9 P.M.	98·2
20	9 A.M.	97
	8 P.M.	100·6
21	9 A.M.	97
	P.M.	100
22	10 A.M.	99·8
	8 P.M.	100
23	9 A.M.	100·6
	8 P.M.	101·6
24	10 A.M.	100·8
	8 P.M.	102·6
25	9 A.M.	100
	8 P.M.	100·4
26	10 A.M.	98·4
	8 P.M.	102·2
27	10 A.M.	102
	8 P.M.	98·2
28	8 A.M.	98·8
	8 P.M.	102·2

Autopsy, twenty-four hours after death.—Height 5 ft. 3 in. Body emaciated. Abdomen prominent. Hair dark brown. Some serum in left pleura, a few adhesions in right. Upper lobe of left and middle of right were crepitant; the rest of the lungs was œdematous and congested; sank in water. Bronchi congested, especially on right side; cretaceous deposits in the bronchial glands. Heart weighed 10 oz.; right ventricle uncontracted, left semi-contracted; their contents were semi-fibrinous. Spots of atheroma at root of aorta, and on mitral valve; other valves normal. Spleen weighed 15 oz., was normal but for its large size. Kidneys normal. Peritoneum contained a good deal of rather turbid serum; there was no peritonitis. Stomach and colon much distended with gas. Intestines normal, except a partial constriction of the distal end of the duodenum, between the epigastric tumour and the colon, which was firmly adherent to the tumour. The pylorus was surrounded by a scirrhous growth, which rendered it rigid without constricting it. The scirrhous mass was of considerable size, and established a firm connexion between all the neighbouring organs. The ductus communis choledochus, which passed through the scirrhous mass, was compressed and obliterated. The thickening extended upwards for some distance between the liver and gall-bladder. In this situation the wall of the gall-bladder was ulcerated, and communicated with a large cavity, which ramified in all directions in the substance of the liver, and was filled with creamy matter stained with bile. The stomach-walls were infiltrated with hard cancer in the neighbourhood of the pylorus; the small curvature was to some extent adherent to the left lobe of the liver. The mucous membrane was stained with old extravasations, and congested at various spots. In the neighbourhood of the scirrhus, and also at a distance from it, there occurred, under the mucous membrane, small swellings about the size of a large bean, containing green creamy matter. The pancreas was surrounded by cancer on all sides, and its tissue hardened.

In the first of these cases we have a history of chronic illness and emaciation, the presence of fluid in three serous cavities, no disease of heart or lungs, a febrile temperature. The diagnosis made was of chronic miliary tuberculosis. As long as she remained in the general ward she rather got worse than better, but free exposure to fresh air certainly coincided with, if it did not produce, a very remarkable improvement, issuing in recovery.

The second case was undoubtedly one of pyæmic infection from disease of the middle ear. How far the rigors were the result of blood-poisoning, and how far of irritation of the nervous centres conveyed from the tympanic focus of disease, cannot precisely be stated. Only this much seems certain, that more or less blood-poisoning did exist, as testified by the occurrence of an abscess in the neck and a threatened one in the right iliac region. There were also indications of lung inflammation, but this probably did not go to the extent of producing abscess.

The third case was diagnosed as one of pneumonic consolidation, the consolidating material tending very strongly to caseate, if indeed it had not already done so to some extent. The absence of expectoration is rather opposed to this view. And it is not maintained that effusion into the pleural cavity did not also exist to some extent, especially at the time when the breath-sound in the back was *nil*. But even admitting that lung phthisis would not have set in had the lad remained in the general ward, it admits of no doubt at all that great improvement ensued within two or three days of his removal to the purer atmosphere, and that it continued uninterrupted, though previously his condition was very unsatisfactory.

In the fourth case hyper-ventilation, having been put in force at an early period, seems really to have availed to arrest the malady, which was doubtless pyæmia.

In the fifth case, also one of pyæmia, hyper-ventilation failed—perhaps from having been too long delayed.

The sixth case was one of great obscurity during life, although there was little doubt that the liver was the seat of the mischief. The rigors of course pointed to the existence of abscess, but they might, I thought, have been occasioned—as in a case related by Frerichs—by the presence of gall-stones in the hepatic duct. The autopsy established the existence of abscess, though it does not seem to have demonstrated how the abscess was produced. It cannot be questioned that very remarkable improvement ensued in this instance while the patient was in the aerated ward. The rigors ceased, the temperature rose less high, the pain in the right hypochondrium and the tenderness ceased entirely, the appetite became wonderful, and the general health improved. Still there remained the suspicious circumstance that the temperature ran up now and then without apparent cause, and that sweating occurred. I had some misgivings about sending him to Walton, but he seemed to long for the fresh air so much, and had found a walk out of doors so beneficial, that I concluded it might be as well to let him go. Had he remained in the aerated ward it is hardly doubtful to me that his life would have been considerably prolonged—perhaps until the cancerous growth produced its own destructive effects. The point that I would lay stress on is, that the patient's system under hyper-ventilation had got to be tolerant of an abscess which before had been causing serious disturbance. It is difficult to say whether the other remedies used contributed at all to the improvement. With the exception of the continuous poultices to the region of the liver, which I quite believe were really useful, I do not think they effected much.

Summarising these cases, we have two of probable tuberculosis, ending in complete, or almost complete, recovery; and four of pyæmia, of which two recovered from the

pyæmia, one was not benefited, and one very much, so as to be able to leave the hospital, though death ensued not long after. Here the pyæmia was complicated with scirrhus. The numbers are far too small to justify any positive conclusion, but the results afford some encouragement to the repetition of similar trials.

It may be well that I should tell you what I mean by the term "hyper-ventilation," which is perhaps convenient, though etymologically incorrect. To carry out the method completely, the first thing is to have a pure surrounding atmosphere, which of course involves that the hospital or the patient's residence be in a healthy situation, say a breezy heath, or an upland, such as that on which the Caterham Lunatic Asylum stands. If such a site is unattainable, the next best thing is to have a lofty building, standing high above all sources of air-contamination, such as manure-heaps and gully-holes. The ward where all my patients (except one) were placed, stands about sixty feet above the ground, and as the windows were always opened from the top, the entering air came from a level outside about ten feet higher. It seemed fairly fresh and pure. If the patients are well supplied with good bed coverings, have warm shawls fastened round their shoulders, and hoods with flaps over their necks, they run no risk of being chilled by currents of cold air. The upper sash of the windows should be sufficiently lowered to leave a space of three or four feet vertical and of the width of an ordinary window, for the outside air to enter. The door should be open sufficiently to allow a very free passage of air, especially in the summer. In the winter a good fire should be kept up, and the door need not be so wide open. It is perhaps better that the patients' beds should not be placed directly between the windows and the door, but a little to one side. The nurses are to be strictly charged to keep the windows and doors open night and day—an injunction which, for their own comfort, they are too apt to disobey. Visits should therefore be made at unexpected hours.

Such ventilation as this is intended to place the patient in as nearly as possible the same condition as if he were in the open air, except that he is sheltered from wet and cold, or excessive solar heat. Its object is to increase the aeration of the blood, induce or promote destructive oxidisation of morbid matters, and to favour also their elimination from the lungs in the expired air. It is a special means for special cases, and not at all to be regarded as a slight advance on the ordinary hygienic requirement. To many maladies it would be quite inappropriate or highly pernicious. I should never recommend it to sufferers from rheumatic fever, Bright's disease, laryngitis, acute or chronic bronchitis, or, indeed, to most of those labouring under our ordinary diseases. While believing strongly in the virtue of abundance of pure air, I equally believe in the injurious action of cold, which the Registrar-General has so forcibly demonstrated. I hold that for the proper management of our hospital cases it is of the first importance that they should be classified. Some there are to whom a warm genial atmosphere is quite necessary, others who need pure air in abundance no matter how cold, and others again who do well enough with moderate ventilation and moderate warmth. It is especially for cases of tuberculosis, pyæmia, septicæmia, puerperal fever, and perhaps typhus, that I advocate the trial of hyper-ventilation. Our means of help in these terrible disorders are all too scanty to warrant our neglecting any that seem rational or hopeful. The difficulties in the way of employing hyper-ventilation are often considerable, perhaps as much from the prejudices of the patient's friends as from any other cause. They are not, however, greater than those which the iced bath had to contend with, and will be easily overcome if we find that the remedy merits to be used.

Before concluding, I will make a few remarks on the great and often rapid variations of temperature which occurred in two of the cases of pyæmia, as they seem to have a considerable bearing on the theory of fever. Thus, as the table shows, in Case 2, at 10 P.M. on Oct. 10th the temperature was 100°; fourteen hours later it was 105°. On Nov. 5th, about 10 P.M. it was 99·8°; on the following day at noon it was 105·4°, and the same twenty-six hours later, but in twenty hours more it had fallen to 98·6°. On Nov. 13th the temperature was 105·2° about 10 A.M.; at about 10 P.M. it was 99°. In Case 6 the temperature at 10 A.M. on Dec. 10th was 98°; at 11 A.M., during a rigor, it was 105°. On the 15th, at 2 P.M., in a rigor, the temperature was 106·4°; about eight hours later it had fallen to 100·8° On the 17th, at 11 A.M., the temperature was 99·4°; at 6.30 P.M. it was 104·8°. On Jan. 2nd, at 10 P.M., it was 105·8°; twelve hours later it was 98·4°. It is perfectly certain that the toxic matter, which was the primary cause of the disease in these instances, was present in the system, and effective during the whole time of their continuance. The protoplasm of the body must have been similarly modified by it all the while. But the amount of heat generated by the infected protoplasm was very much influenced by some other factor —viz., the "Etwas schutzendes," which, as Dr. B Sanderson says, is of course the nervous system. Paralysis of heat-regulating centres caused increased generation of heat.

FILARIA SANGUINIS HOMINIS (MATURE FORM), FOUND IN A BLOOD-CLOT IN NÆVOID ELEPHANTIASIS OF THE SCROTUM.

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THE LANCET of July 14th last contains a very interesting communication from Dr. Cobbold, announcing the discovery in Australia, by Dr. Bancroft, of "the sexually mature form of one, at least, of the various kinds of minute nematoid hæmatozoa." One of the specimens was obtained from a lymphatic abscess of the arm, and the others were caught in a trocar whilst puncturing a hydrocele of the spermatic cord. It will be interesting to know whether the blood of these persons contained embryoes of the same character as those referred to as escaping from the bodies of the worms, and comparable to the filariæ described by Carter, as hitherto none of the filariæ described by this distinguished observer have been found in the blood.

During the last five years I have availed myself of every opportunity that presented itself of minutely examining the tissues of persons, who have either died or been operated upon, in whose blood the embryo filaria sanguinis hominis had been observed. All attempts, however, to find the parent worm had been unsuccessful. Speaking of these matters a short time ago with Dr. Gayer, professor of surgery at the Medical College, Calcutta, he very kindly promised to let me have for examination the diseased growth of the first case of "nævoid elephantiasis" of the scrotum which might be operated upon by him.

Yesterday (August 7th) such an opportunity occurred. A young Bengalee was admitted into hospital, under Dr. Gayer's care, affected with disease of the scrotum of this nature. It was a very characteristic example of the affection; the cutaneous tissues manifested the usual soft, spongy character, with, here and there, somewhat blob-like elevations, but unaccompanied by any sero-chylous discharge, nor was there a history of previous chyluria.[1] The first incision, however, revealed the fact that the tissues were soaked in chylo-serous fluid of a pinkish hue, which rapidly coagulated. This exudation flowed copiously from the incised tissue, although the general circulation was completely arrested by means of an elastic bandage. The fluid which thus escaped, the diseased tissues, the fluid from a hydrocele of the cord, and some varicose enlargements around the tissues surrounding the cord, were carefully collected in separate vessels, and removed for examination. The blood and the chylo-serous exudation from the diseased parts contained numerous embryo filariæ, but none could be found

[1] I have, on former occasions, taken the opportunity of observing that this condition of the urine sometimes precedes, at other times follows, the manifestation of the scrotal affection; and that the fact of the urine being affected is sometimes concealed or disowned by the patient. There is at present, in the Medical College Hospital, a case recovering after an operation for the removal of this elephantoid kind of scrotum, in whom no suspicion of the co-existence of chyluria was entertained until after a catheter had been passed, and the state of the urine thus accidentally detected.

in the three or four ounces of the straw-coloured fluid of the hydrocele, nor were there any attached to the inner surface of the sac, the whole of which was carefully explored, and the epithelial lining scraped with the edge of a cover-glass.

This was the fourth pathological specimen of this character in which I had searched for the mature entozoon, the embryoes being present in abundance; and yesterday, after spending some eight hours in going through the removed tissues one after another, it seemed as if this search also would prove negative. At last, however, whilst teasing a blood-clot under a dissecting microscope, my eye was arrested by white thread-like objects in a state of great activity. These, on being transferred for examination under a higher power, were found to be specimens of two mature filariæ. One of these contained ova, with embryoes identical in appearance with the free embryoes in the blood, in the exudation, and in the tissues. The other specimen was thinner, and had been so far injured by the needles used in teasing the clot as to have lost both terminal ends. What remained was about half an inch in length; it was of firmer consistence, and manifested a stronger tendency to maintain a coiled condition. It measured transversely $\frac{1}{150}$", and the contained alimentary tube $\frac{1}{250}$". Another tube was included in the cavity of the specimen, suggestive of its being a male, as, from its microscopic characters, it closely resembled the spermatic duct of some other nematoid blood-worms which have come under my observation. The female worm also had suffered from the needles, for the caudal end had been severed and could not be found, hence the total length of the parasite cannot be stated; the length of the portion secured was about $1\frac{1}{4}$". It would occupy too much of the space of a journal devoted to medical subjects generally were an attempt made to give all the minute details of the microscopical character of the parasite; on the present occasion, therefore, I purpose restricting myself to giving a general description, with figures of such of the leading characters of the entozoon and of its contained progeny as will suffice to establish that it is the parent Filaria sanguinis hominis, together with such measurements as will enable comparisons to be made between it and such other mature nematoid hæmatozoa as have already been, or may still be, discovered in man and animals.

As already intimated, the parasite is of a white colour; the cuticle is smooth, and devoid of transverse markings, except such as are induced by the contraction of the subjacent muscular walls. The transverse measurement of the female worm where it is filled with ova = $\frac{1}{100}$". The woodcut (Fig. 1) represents the anterior portion of the mature entozoon, magnified 100 diameters. The head is seen to be slightly club-shaped; it measures $\frac{1}{300}$" across. The mouth does not manifest any distinctly marked labial subdivisions, nor are there any chitinous processes evident either before or after death. The diameter of the oral aperture = $\frac{1}{2000}$". The œsophagus does not manifest any very pronounced muscular striæ (they are more delicate than can be well indicated in a woodcut); it is $\frac{1}{25}$" in length, and shades off almost imperceptibly into the intestinal tube; the latter measures across $\frac{1}{625}$", and is filled with molecular and granular matter. The width of the parasite immediately below the cephalic extremity is $\frac{1}{375}$", increasing to $\frac{1}{125}$" at the site where the œsophagus joins the intestine, and at a distance of another half-inch or so lower down acquiring the width of $\frac{1}{100}$", or a little over.

The second figure represents the appearance of a portion of the worm where the uterine tubules are seen through its walls to be filled with ova in various stages of development. The intestinal tube may be seen winding along the side of the tubules. The latter are of very delicate texture, each measuring $\frac{1}{375}$" across. These are filled with ova, and when first examined the contents of many of the latter manifested distinct movements, the degree of activity corresponding to the extent of the maturity of the contained embryo. Ova in various stages of development could be observed packed together in the same part of the tubules.

The ova do not possess any distinctly marked "shell"; from the smallest to the largest nothing but a delicate pellicle can be distinguished as enveloping the embryo in all its stages; consequently the form assumed by the ovum depends to a great extent on the degree of the surrounding pressure. To the right of the sketch (Fig. 3) will be seen figures of ova of various shape—spherical, triangular, oval, &c., and with a considerable latitude as to size. The average of five measurements, taken at random, of the less-advanced kind of ova—i.e., those in which the outline of the contained embryo was not distinctly evident = $\frac{1}{133}$" by $\frac{1}{2000}$"; whilst the average of three measurements of ova in which such embryoes were visible = $\frac{1}{91}$" by $\frac{1}{171}$".

FIG. 1.

FIG. 2.

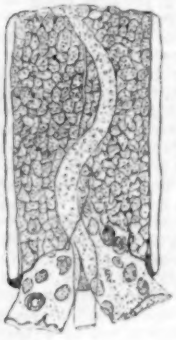

FIG. 3.

FIG. 1.—Anterior extremity of the mature Filaria sanguinis hominis. (Magnified 100 diameters.)
FIG. 2.—A portion of the mature Filaria sanguinis hominis: showing uterine tubules filled with ova in various stages of development; also the intestinal tube. (Magnified 100 diameters.)
FIG. 3.—Ova and embryoes of the Filaria sanguinis hominis. (Magnified 300 diameters.)

When the latter, after having arrived at this stage of development, are examined during life, it is in many instances difficult to state whether they are to be considered as freed embryoes or not, as the egg-"shell" has become so extremely attenuated and translucent as only with difficulty to be distinguished. By pressing the covering-glass firmly, the sac may often be ruptured. It would, however, appear probable that, even when the embryo acquires worm-like appearances, the envelope is usually not lost in this species so long as it continues in the blood. On former occasions I have ventured to urge the importance of carefully noting whether, after a satisfactory examination of the living embryo-hæmatozoon, an enveloping sac could be distinguished or not, as it seemed to me, judging from the appearance observed in several hundred specimens of allied organisms in the blood of dogs in India, that this point would be of great value for diagnostic purposes. No sac has been observed surrounding such embryoes in the blood of dogs, nor in those found in man in Egypt.

In the same woodcut will be seen a representation of the embryo with its shell stretched to the full length of the worm, the specimen being in no way distinguishable from the embryoes found in the tissues and fluids above referred to, except in being smaller than the majority of them. These facts very strongly corroborate the view maintained by Leuckart with regard to embryo-hæmatozoa generally, that they do not advance in development so long as they

remain in the blood. I have not seen a distinctly differentiated intestinal canal even in any of them, much less any indication of reproductive organs.

I have retained for the mature parasite the name originally applied to the embryo—applied obviously on the supposition that sooner or later the parent would be forthcoming. As it has, moreover, already been adopted by Leuckart in his recently completed standard work "On Parasites," and by other continental authorities, a new name, if not necessary on anatomical grounds, would only lead to confusion.

It is possible that when the parasite discovered by Dr. Bancroft has been more definitely described, and its anatomy investigated, it may become evident that it is identical with the Filaria sanguinis hominis. Should such turn out to be the case, the etiological signification of the parasite will present a greater puzzle than ever, seeing that the affection of the scrotum of the character above referred to—the affection described by Dr. Bristowe under the designation "elephantiasis lymphangiectodes"—would appear to be wholly unknown in Australia.

In conclusion, I desire to express the great obligation I am under to Dr. Gayer for the opportunities which he has afforded me of studying this subject in his wards.

Calcutta.

REMARKS ON

A CASE OF RARE DISLOCATION OF THE HIP.

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THE subjoined case, not only on account of its extreme rarity, but also of some other features of interest about it, may not be unworthy of publication where so much has lately been written on dislocations.

A boy aged nine years presented himself as one of my out-patients at University College Hospital on Thursday, April 5th, 1877. Coming into the room, he limped slightly, but apparently walked without any pain or much inconvenience. He was ruddy, healthy, and muscular, and had, his mother stated, been running about perfectly well until the preceding Friday. On this day, while at play, he made a spring to ride "pick-a-back" on one of his companions, but, missing his hold, fell. His mother described, almost unasked, the position in which his lower limbs were when he came down to the ground. The right was, according to her, strongly abducted and somewhat flexed, and the left doubled up under him as he fell on his nates. After the fall he felt some pain in the hip, and his mother noticed the following deformity, which was well marked when she brought him to me, and but for which she would not have come, so little distressed did he seem. The first point that caught the attention as the boy stood upright was that the right thigh was strongy abducted, and that in order to bring the foot to the ground he was obliged to tilt the pelvis down towards the right side; besides this, the thigh was slightly flexed on the trunk, and the foot slightly but distinctly everted. The next point that struck me, on removing his clothes, was a flattening of the thigh in the region of the great trochanter, and the obliteration of the fold of the nates; also that the thigh was rigid—i.e., could not be flexed, adducted, or extended.

From the history of the violence, the first thing that suggested itself to me was a dislocation into the thyroid foramen. But although, on laying the boy on his back and comparing the limbs when brought as nearly into the same plane as possible, I found there was an *apparent* lengthening of about an inch and a half, I saw that the pelvis was oblique to about the same extent. Then two careful independent measurements—the first by myself in one room, and the second by one of the house-surgeons, who was not then present, in another subsequently—showed *real* shortening of from a quarter to half an inch in the whole limb from the anterior superior spine of the ilium to the internal malleolus. The thigh could not be brought down on the bed without rotation of the whole pelvis. Again, searching for the position of the head of the bone, it was clearly not in the thyroid foramen or on the pubis. Then examining the buttock while the boy was under chloroform, I had a good opportunity of making out all the parts, and could come to no other conclusion than that the head lay just above the acetabulum, and that the trochanter was drawn backwards towards the sciatic foramen. It should be mentioned, again, that the long adductor of the thigh was very tense before chloroform was given, and that the thigh could neither be brought down from its condition of slight flexion nor inwards from its state of abduction without moving the whole pelvis, nor could it be flexed on the abdomen.

Reserving further comments for the present, I shall now describe the manner in which the dislocation was reduced. The boy being laid on his back on the operating table, I attempted without chloroform to adduct and flex the thigh on the abdomen, the pelvis being fixed by an assistant. This was impossible, owing to muscular resistance. Chloroform was then administered, and I was able, without the slightest exertion, to flex the thigh in the adducted position, and the leg on it; circumduction was then as easily effected, and at the same time rotation of the femur outwards on its own long axis, while the limb was being brought down at the end of the circumduction. It was plain, however, that the bone had not returned to its place. I then immediately made a fresh attempt in precisely the same manner, but without avail. I record these two efforts carefully, not because they were the proper movements to make, but because the fact of their failure tends to add clearness to the diagnosis when we consider the movement that was successful. After a moment's pause I now drew the limb gently downwards in its long axis, and again adducted, flexed, and then circumducted the thigh as before, downward traction being kept up all the time on the head, but this time rotated the thigh *inwards*. This effort was perfectly successful, but as reduction was effected without the slightest start or jerk of the bone as it returned to the socket, the fact was not apparent for a moment or two, when I noticed that the limb was of its normal length, and now lay flat on the table like its fellow. The usual prominence of the trochanter was now well marked, as also the fold of the nates, and all the motions of the limb were perfectly restored. The obliquity of the pelvis had completely disappeared, and measurement showed the two limbs now equal in length. The trochanter had also come forward again, as indicated by its relation to the apex of the well-known triangle drawn with pen and ink, before any attempt at reduction had been made. After reduction the tip of the trochanter was considerably anterior to the apex of the triangle to which it had previously corresponded.

In commenting on this case I should first like to state that the new position assumed by the dislocated head was not at all clear *to the touch*. But there could be no doubt at all that it was not on any part of the thyroid foramen or pubis proper, for there was no trace of fulness anywhere along the latter. It was also clear that the head was forwards and the trochanter backwards, for the latter could be easily felt near the tuber ischii, and the limb was everted.

Since writing these notes of this case on the day on which I reduced the dislocation, I have considered it in all its bearings with the help of all the books within my reach, and I now believe that the conclusion arrived at then was, in the main, correct, and that the head of the femur was forced directly upwards, and lay just below, and a little outside of, the anterior inferior spinous process of the ilium, and immediately above, or upon, the brim of the acetabulum. I am aware that I spoke of this at the moment as an everted dorsal, which may be considered a misnomer, the term usually applied to this form being the "sub-spinous" (Bigelow) or "sus-cotyloidienne" (Malgaigne). It is, however, a variety of everted dorsal in one sense. (See Busch.)

Writing of this form of displacement ("subspinous") Bigelow says:—"If thrust directly upwards the bone may lie beneath the Y ligament and the inferior iliac spine; but this displacement requires that the upper part of the capsule should be completely detached from the edge of the socket. The firm bearing of the neck against the Y ligament may then explain *how the patient has in some recorded cases* [here he quotes Malgaigne] *been able to walk imme-*

diately after the accident. The limb is still everted, but less abducted or advanced, and the head of the bone is plainly felt in its new position—*in the absence of which evidence the shortening and eversion might possibly be mistaken for fracture of the neck.*" Now, in my case the boy was able to walk well after the accident for six days, which would have been impossible if the Y ligament was completely torn by the head being thrown further backwards and upwards, as in a very well-marked everted dorsal. There is also an admission in this quotation that the head may not be felt in this position, which is consolatory to me, this having been a great difficulty in the way of my diagnosis. The question of fracture of the neck occurred to me at the time, but I dismissed it, considering the age of the boy, the mode in which the accident occurred, the fact of his being able to walk without pain, and that after reduction there was no crepitus, and the bone resumed its normal condition.

That this "subspinous" or "sus-cotyloidienne" is a very rare form of luxation our English text-books amply testify. As a rule, it is not described, but we are told generally that the position of the head of the bone "has been found to range in different instances between the anterior inferior spinous process and the sacro-sciatic notch." (Sir W. Fergusson; see also Bryant and Holmes.) Of foreign writers, Malgaigne was only able to collect five cases in 1855, and these have formed the staple commodity of all later writers (who have copied them from book to book) until Hamilton, of New York, placed one other on record in his work published in 1871. In Malgaigne's work, "Des Fractures et des Luxations," which I consulted recently for the first time, the cases are briefly as follows. One described by Barrier, which, though undoubtedly subspinous or sus-cotyloidienne primarily, yet differs somewhat from my case. The next, in M. Gerdy's practice, died the day following the accident, when much injury about the hip was found. The third, a case treated in St. George's Hospital (LANCET, 1840-41, vol. ii., p 281), although essentially "subspinous," differs. I find on carefully reading the original report, materially in the extreme rotation outwards of the limb until the great toe pointed somewhat backward. It also differed in the fact that the patient died shortly after admission, injury unreduced. The fourth is reported by Mr. Wormald in Lond. *Med. Gaz.*, Jan., 1837, and corresponds in every particular with the case now described. I find that in the displacement of the head, the position of the limb, and the fact that the man was able to walk well after the accident, it is precisely the same. But it was unreduced until death. The fifth case was reported by Cruveilhier as only discovered after death, being mistaken for fracture of neck of thigh-bone. Since Malgaigne collected these in 1855, only one case more of "subspinous" dislocation appears to have been placed on record—namely, that by Hamilton, as occurring in his own practice. In every particular it appears to correspond to Wormald's and my own case, except in this, that after walking about with the unreduced dislocation for three years, the injury reduced itself during a sudden and violent exertion, when "at once the complete functions of the joint were restored," and that three months later, owing to a sudden wrench, the head again slipped out as before, after which he would not allow any attempt to be made at reduction.

Here, then, it would appear, we have the only six cases of "subspinous" dislocations yet placed on record, to which I now add a seventh. I have searched carefully for others, but cannot find them. My friend and former teacher, Prof. Busch, of Bonn, who has given much attention to the subject of luxations, and whose book is now before me, also describes this form as very rare, although as far as pubic dislocations go he has had four in his own practice. He, too, is obliged to go to the cases collected by Malgaigne. Among the other German observers I have looked in vain for any information on the point in Volkmann's "Neue Beitr. z. Path. u. Therap. d. Krank. d. Bewegungsorgane," and in Von Pitha and Billroth's "Handbuch d. Allg. u. Spec. Chirurgie" (a representative book). In Cooper's Surgical Dictionary also only the same stock cases are alluded to. Bigelow, too, is obliged to refer to Malgaigne for an instance of this form of dislocation, and quotes Wormald's case cited by him, not having seen anything of the kind himself. From the fact that these few cases are handed freely about from one great authority to another an impression appears to have arisen that this "subspinous" dislocation is, on the whole, not so extremely rare. Indeed, the familiar way it is referred to in the works quoted justifies this conclusion of the general reader. Of course other cases may have been seen, but they do not appear to have been recorded anywhere, which is a matter for regret if they have occurred.

In conclusion I am much interested in finding that in the cases of Barrier and of Gerdy—the only two out of the six hitherto recorded in which reduction was effected by surgical aid—the means successful in their hands were precisely those which succeeded in mine in replacing the head of the bone, as will be seen from the following quotation from Malgaigne:—"La réduction pourrait être tentée sans doute par l'extension direct; cependant M Barrier l'a essayée en vain. C'est par la flexion, jointe à l'adduction et à la rotation *en dedans*, qu'il reporta la tête dans sa cavité; la flexion, unie à la pression exercée d'avant en arrière sur la tête fémorale, avait réussi de même à M. Gerdy."

It may also be worth noticing that, if we include a doubtful instance alluded to by Malgaigne as described by Palletta in 1781, out of these eight cases of "subspinous" or sus-cotyloidienne luxation, three were in children. Mr. Wormald's was a boy of fourteen years; Palletta's a child of twelve years; this last now recorded a boy of nine years.

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UPON THE ARSENICAL ATMOSPHERE AND ARSENICAL HOT SPRING OF THE SOLFATARA AT POZZUOLI (NEAR NAPLES), IN THE TREATMENT OF CONSUMPTIVES.

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THE writer was continuously engaged for the four years 1872-76, and in part at the request of the American Medical Association, in investigating the relative claims of certain of the health resorts of Central and Southern Europe. The inquiry was made more particularly with reference to the needs of American invalids, who come out here in great numbers, and by no means always go to the localities best adapted for them. It is possible, however, that a brief communication upon one of the points indicated in the report that he has rendered, may also interest the English profession, to whom the question of a change of climate for their patients—though with Bournemouth, Ventnor, Torquay, and Penzance so near at hand—must often be an equally difficult one to decide.

In a series of letters published at Paris in 1874, and subsequently reprinted at Naples,[1] after speaking of the climatic and hygienic relations of the latter city, the writer discussed the respective merits of its neighbouring and subordinate health resorts, dismissing several of these with the brief remark that they are "hardly fitted for the residence of invalids, for the reason that as yet they are not provided with sufficiently comfortable hotels." Among these was Pozzuoli. It was well known in Naples during the past two years that his attention had been forcibly drawn to certain of the special characteristics of Pozzuoli, and it may have been partly in consequence that a comfortable hotel-pension, under English management, and especially for invalids, has been established there.[2]

One of the objections most frequently made, and with most reason, against Southern Italy as a health resort, has been the fact that, save in specially sheltered and usually very limited localities, its winter climate is a changeable one, and, therefore, particularly unfitted for chest affections,

[1] Southern Italy as a Health Station for Invalids (Naples, R. Marghieri; 1875), p. 70.

[2] This house is under the same control as the similar establishment, already favourably known to invalids, at Vico Equense, midway between Castellamare and Sorrento, on the other side of the Bay of Naples.

while the points both within Naples and outside it most resorted to by English and Americans for winter residence are some of them directly exposed to the harsh and snow-chilled easterly wind—as, for example, the favourite Strada Santa Lucia, in Naples, and the whole of the town of Castellamare. Delightful and safe though the latter place may be during the late spring and summer, it is hardly to be recommended during winter for any class of invalids.[3] Till now, the only places in Naples and its neighbourhood that have been at all fit for consumptives during winter have been, in Naples, the Riviera di Chiaja, and the westerly extremity of the new Corso Vittorio Emmanuele above it, the respective merits of which, so far as concerns the chance of enteric and malarial fever, the writer has elsewhere discussed; and outside the city, Amalfi, Pozzuoli, and the islands of Ischia and Capri, to which latter invalids, who go during winter, often do so with fear and trembling over a stormy sea, while Pozzuoli till now has been unprovided for their reception. Amalfi, on the Gulf of Salerno, is nearly four hours away from Naples by rail and carriage. The two hours' drive from the nearest station, Vietri, upon a cliff-road far above the sea, is very attractive, fully as much so as the best part of that from Castellamare to Sorrento, or the Corniche road on the Riviera; the town seems, at first sight, well sheltered, and there is so much of beauty and novelty about one that the visitor is always charmed. Directly down through Amalfi, however, there comes from the mountain a little river, and its course serves as the channel for at times fierce winds, while the town itself is filthy and ill-kept. Pozzuoli, on the other hand, is better sheltered, lies equally to the south, and is very much more accessible from Naples. Till now the question has been decided, so far as their equal sun and warmth are concerned, by the fact that there were two quite comfortable hotels at Amalfi, and nothing whatever available by invalids at Pozzuoli. It will be seen that the writer is quietly ignoring certain very positive assertions adverse to Pozzuoli, that must have been made without personal knowledge or sufficient reflection on the part of their authors. For instance, mention is made in the latest edition of "Tanner's Manual," by Dr. Broadbent, of "the fatality of phthisis at Pozzuoli."[4] Now patients already moribund may be carried to a place to breathe their last, as is yearly done at Mentone, without justly causing its condemnation; while for a native Italian, once down with pulmonary disease, in that country considered contagious, and to which their damp houses render them peculiarly prone, to hope to recover under purely Italian nursing and hygiene is something ordinarily out of the question. That Pozzuoli lies on the road, though on the Naples side, to "the undrained swamps in the neighbourhood of Baiæ," is as much to the point as to speak of Hampstead in the same breath as the discharge outlets of the Thames sewage. An invalid may drive to the one, as he may to the other, if he chooses to do so, but it is not necessary in either case.

During 1873 and 1874 the writer's attention was chiefly given to the ordinary considerations of local climate, and a study of the Neapolitan chain of mineral springs extending from Meta, adjoining Sorrento, through the whole circuit of the gulf, and ranging in temperature from 15° C. or thereabouts at Meta, Vico Equense, and Castellamare, through from 17° C. to 21° C., in the springs of the city of Naples, to from 30° C. to 90° C. at Pozzuoli, Baiæ, and the adjacent island of Ischia. He then became aware, and he thinks it was from a chance statement of his friend, Dr. J. A. Menzies, of Naples, that several of the more noted Neapolitan physicians were commencing to claim for Pozzuoli an exceptional excellence of a wholly different character, asserting that a portion of it had an atmosphere of its own, perceptibly charged, not with sulphur merely, but with arsenic from the semi-extinct volcanic crater known as the Solfatara, which, from but slightly rising above the level of the adjoining country, is easily accessible on foot, or by donkey or sedan chair, to the most feeble invalid. The breathing of this arsenical atmosphere, it was stated, not only theoretically promised to be of benefit in cases of threatened or actual pulmonary tuberculosis, after repeated visits to the crater, extending over a longer or shorter period, but had in fact been proved so by actual experiments.

Such statements, in such a country, were naturally to be received at first with incredulity; but occasion offered for the writer to make a practical test of the matter during the winter of 1874–5. A lad of eighteen, extremely tall for his age, feeble and ill-nourished, had passed the preceding two winters at Mentone, under the supervision of Dr. Henry Bennet, and at Sorrento. He had gone constantly from bad to worse, so that his friends, including the writer, had become extremely solicitous as to the result. The patient was now confided to Dr. Menzies, by whose directions, after the latter portion of the autumn of 1874 had been spent on the westerly extremity of the Corso Vittorio Emmanuele, at Naples, he was removed, still failing, to Amalfi. He passed some weeks at this place without appreciable benefit. It was therefore determined to make trial of Pozzuoli, despite the difficulty of obtaining a passably comfortable lodging. An apartment, such as it was, was obtained, was furnished, and a cook carried out from Naples. The patient was unable to walk even the short distance from the house to the Solfatara, and was therefore carried into it by a couple of porters, breathing its atmosphere for a gradually increasing period. Almost immediately he commenced to improve. In addition to the prolonged respiration of this special atmosphere, he drank quite regularly in minute quantities the Solfatara water, which springs directly from the crater, and unlike the prevailing mineral sources of the neighbourhood, which are alkaline, is sharply charged with sulphuric acid and in use requires large dilution. This spring, and also the atmosphere of the greater vent of the crater, contain arsenic. Other and ordinary measures, demanded by the alarming exhaustion of the patient, were meanwhile pursued, and a certain amount of the improvement which now set in and became continuous, was no doubt attributable to them. There could, however, be no question that this improvement initiated from, and was perceptibly rendered uninterrupted by, the special influences of the Solfatara. In the case reported, marked physical signs were wanting. All the rational symptoms, however, had long been those of pulmonary disease.

Though now greatly interested in the subject, the writer could as yet—in view of a possible relapse in the instance referred to,[5] the impossibility of forming a conclusion from so limited an experience, and the total unfitness of Pozzuoli for the residence of invalids who had been accustomed to average American and English comforts—only say the following, in his Report to the American Medical Association, made in the spring of 1875: "Regarding the Solfatara at Pozzuoli, which has been recommended as a residence for certain classes of invalids, the Neapolitan physicians are of opinion—and the question is one worth considering—that the arsenical and other emanations given out by the still smoking crater sensibly and beneficially modify the neighbouring atmosphere in a medicinal way."[6]

One of the first attempts thus to utilise the local atmosphere of the Solfatara seems to have been made by Dr. Abele Franza, and is recorded by him in a paper quoted by Professor Sebastiano De Luca, of the University of Naples.[7] Franza's patient, a Russian, was attended in consultation with Professors Manfré and Lauro, and the diagnosis was of advanced tubercular disease. He had been treated in Naples for four months without benefit, and the case had been pronounced a hopeless one. He was removed to Pozzuoli, and remained there for six weeks, being simply from time to time carried into the Solfatara and respiring its vapours. This was in 1871. The improvement is declared to have been immediate, and to have remained permanent.

A similar case, of even more interest, was recorded at about the same time by Dr. Annecchini.[8] The patient was

[3] If the writer correctly recollects the opinion expressed by Dr. Maclean, of Netley, a year or so ago, concerning Castellamare, he is compelled to differ from that gentleman, who would, however, have probably modified his views as to this place, and, perhaps, even Naples also, after a more prolonged residence.

[4] An Index of Diseases and their Treatment (London, 1867), p. 442.

[5] No relapse, however, occurred. The patient was able to pass the winter of 1875-6 continuously in Naples, living upon the Vomero, above the Corso Vittorio Emmanuele; and he has now returned to America, convalescent. For the sake of other invalids, it may be well to state that the house occupied in Naples—Castello Monjoujou, the private residence of Prince Palagonia, but still sometimes available—is altogether the most desirable in the whole city for a consumptive stranger, alike for sheltered and sunny situation, cheerful outlook, dry and spacious gardens, and internal comfort.

[6] Ibid., p. 70.

[7] Ricerche Sperimentali sulla Solfatara di Pozzuoli (Naples, 1874), p. 13.

[8] Ibid., p. 43.

seen in consultation with Prof. A. De Martino of Naples, and the case considered clearly one of acute tuberculosis (tisi galoppante). A year after this lady commenced to inhale the air of the Solfatara, and, solely in consequence (per virtu esclusiva della potenza medicatrice dell' aria della Solfatara), she was pronounced to have been radically cured (essa era in uno stato di salute il più soddisfacente, come se nulla avesse sofferto).

The admirable work upon the Medical Geography of Italy, by Prof. Luigi Marieni of Milan, which, so far as the mineral springs of that country are concerned, must long remain a chief authority, was published in 1870,[9] a year before these facts were made known. In 1868 and 1869, Prof. De Luca had presented three papers to the Academy of Sciences of the Royal Society of Naples upon the Composition of the Thermo-Mineral Water of the Solfatara, and the Temperature of the Greater Throat (fumarola) of its Crater, whence the arsenical exhalations escape, and within a limited though constant radius of which they are appreciable by Marsh's test. Other papers, chemical and therapeutical, upon the same subject, have followed from this gentleman, to the number of twelve or more, and are to be found in the *Comptes Rendus* of the Naples Academy; still others have been communicated by him to the Academy of Sciences at Paris; and he has also published the *brochure* already quoted, entitled "Experimental Researches upon the Solfatara of Pozzuoli." The effect has been to widely attract professional attention in Southern Italy, guaranteed as Prof. De Luca's statements have been by the testimony of many of the physicians and surgeons to the great hospital Degl' Incurabili at Naples.

Whether the hopes of these gentlemen are well grounded can only be proved by continued experiment. They are now, however, even more sanguine than at first, and at the present moment, after, it is said, "the complete and radical cure" of quite a number of additional cases of advanced phthisis, who had been made to reside continuously for several weeks within the Solfatara, a branch of the Incurabili Hospital, by order of its council, is being constructed within the crater, for the special treatment of pulmonary disease. To make the collateral test upon English-speaking patients has, as already stated, now for the first time been rendered possible at Pozzuoli.[10] It is not unlikely that in the future the crater of the Solfatara may become as famous for its effect upon the prolongation of life as the neighbouring Grotto del Cane has been for imperilling it.

It will now be interesting to test for arsenic the atmosphere of the various "stufe," or volcanic vent-holes of steam or dry air, existing upon the island of Ischia, which does not seem to have yet been thought of, though they were studied with care by the late Dr. Chevalley de Rivaz, of Casamicciola;[11] and it would be equally well that the same should be done with those at Calistoga and the Geysers, already noted for other reasons in the treatment of disease, in the vicinity of San Francisco, California.

To speak of cases besides phthisical, such as certain uterine affections &c., for which the strongly astringent water of the Solfatara is both indicated and employed, would be beyond the limits of the present paper.

Queen-square, W.C.

[9] Geografia Medica dell' Italia, Notizie sulle Acque Minerali, pp. 665. Milan, 1870.

[10] His remarks may perhaps carry the greater weight if the writer mentions, what is not always the case with those calling attention to localised health resorts, that he is no longer stationed at Naples, and has no interest whatever in the diversion of invalids towards Southern Italy.

[11] Description des Eaux Minero-Thermales et des Etuves de l'Ile d'Ischia. Naples, 1859.

INCISION OF THE CERVIX IN UTERINE HÆMORRHAGE.

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CASES occur to the practitioner not unfrequently where the prominent symptom is uterine hæmorrhage, and hæmorrhage of a character which will not yield to the ordinary local and general means, and is yet sufficient to make it desirable that it should be subdued. Such is sometimes the case with intramural or submucous fibroids in which matters are not sufficiently ripe for attempting enucleation or other radical proceeding.

The following cases, which came under my observation in a comparatively short space of time, will show the nature and also the means which were used by way of treatment. In all of them, incision, more or less extensive, of the cervix had a beneficial effect; and it is to this procedure that attention is more especially directed, for, though not by any means a novel measure, it is not one which is very generally adopted.

CASE 1. — Mrs. H——, private patient, aged thirty-three. Has had two children and eight abortions; the last pregnancy an abortion six years since. Has latterly grown stout. Has had profuse periods for two years. Of late the intermenstrual interval has been getting less and less, until now her constitution appears to be much affected by the almost continual draining. Medicines had seemed to have no influence. Does not suffer much pain. On examination the uterine sound passes three inches and a half; the uterus feels bulky all round to the finger through the vaginal roof; the os is slightly open. The cervix was divided by scissors on Sept. 3rd, 1875. After this no loss occurred, and her periods are now almost quite natural—i. e., regular as to time, and scanty, rather than otherwise, as to quantity.

CASE 2. — Mrs. W——, aged forty; married eleven years, but has had no children. Was seen in consultation on Jan. 28th, 1876. Has been under treatment for flooding, more or less continuous, for twelve months; is pale, the loss at times being very excessive. On examination, the os is normal, closed; fundus anteflexed. The uterine sound passes three inches and a half. A mass is felt behind, and a nodule to the right side of the uterus; this last is small. Never had much pain. The point of the sound goes in front on introduction, and appears to raise up some of the swelling felt before its introduction. Ordered to take ergot for a week, when I saw her again, on Feb. 4th. The mass is felt more to the right side than at the first visit. A small sponge tent had been inserted the day before, which opened the os a little. She was well syringed with Condy's fluid, and the cervix was incised on the right side, rather in front. After this date she had no hæmorrhage, and I heard she was quite free at least six months afterwards.

CASE 3.—Mrs. B——, aged forty-three, had had several children, the last nine years ago; seen in consultation 8th August, 1876. Three years ago first had a flooding when crossing the yard, and a clot passed which was thought to be "a false conception." Since then she had profuse periods with very short intervals of freedom between. She often passes large clots, and this is increasing. Uterine sound passes five inches; uterus feels to be much enlarged; os open. A small tangle tent was easily passed, and then another, which penetrated only a short distance, as the inner os appeared to be considerably contracted. The next day the tents were removed. A very tight constriction at the inner os had produced a deep indentation on the two tents, in addition to pressing them close together. Condy's fluid was used with a syringe, and then the cervix was divided with scissors on the left side and a little in front, also the inner os, with a guarded bistoury.

She is now in a very improved condition. Mr. Bradley, who attends her, tells me that though she has some pain and passes a few clots at her periods, yet she has no intermenstrual discharge, and her periods are not excessive in quantity.

CASE 4.—Mary A. S——, aged forty-three, single, has been ill for nine months, the first symptom being stoppage of urine, which required the catheter. Has had three severe floodings during this time, the last occasion lasting for seven weeks, and is just over. On examination, the uterus is large, fairly mobile; uterine sound passes four inches and a half; the finger in the os feels a mass in the posterior wall, which is also felt in Douglas' space; has never suffered much pain.

She came first to the Women's Hospital on Jan. 12th, 1876. On Feb. 5th the cervix was divided with scissors posteriorly; I then passed my finger through the inner os, very easily dilating with the slightest pressure, and could feel the tumour, like a cocoa-nut, bulging into the cavity from the posterior wall. I then incised the capsule with a

bistoury. No flooding occurred at all after the incision, though it was present up to the time of the operation. The termination of this case was most unfortunate, as in consequence of the subsequent attempts at enucleation, a rigor occurred, followed by symptoms of septicæmia, which terminated fatally. The case is quoted, though, as a fair illustration of the cervical incision being the means of restraining the hæmorrhage, and instructive as a warning not to expect too rapid and brilliant results, only to be marred by our rendering aid to Nature a little more than she needs. It may be added that before the incision was made in all these cases, a free injection of Condy's fluid was used, so as, if possible, to avoid the application of any decomposing blood or septic material to the raw surface of the incision.

CASE 5.—Mrs. C——, aged forty, widow, two children, the last nine years ago, a cook, came to the hospital, Jan. 19th, 1876. She said a tumour was first noticed three years ago, and had always caused her much pain. The periods were at first regular, but had been profuse, and latterly the interval was shorter. She is exceedingly pale and anæmic. On examination, the abdomen at umbilicus is 33½ in. in circumference, and over the most prominent part of the tumour 36½ in. A hard tumour is felt more on the right side, and about the size of a fœtal head; it moves with the uterus, which is fairly mobile. The uterine sound passes seven inches, and its point is thought to be distinguishable through the parietes. The mass of the tumour is felt to be in the front wall of the uterus. The os is open. She has been treated largely with medicines, but with no benefit. The flooding continued, and on Feb. 9th three tangle tents were inserted at 6 P.M. On the 10th they were removed. On the 11th the cervix was divided, and the capsule of the tumour incised, which was felt plainly in the anterior wall. Inner os quite contracted since yesterday.—16th: Four tangle tents again inserted.—17th: Tumour freely incised on its free surface. After this date she had no loss.—March 8th: Went into the country, and shortly after resumed her situation, looking quite a different woman, and feeling stronger than she had done for more than two years.—May 31st: Flooded slightly after some hard work in cleaning out the cellar, which was stayed by a week's rest in hospital.

CASE 6.—Mrs. P——, aged fifty, eight children and three abortions, the last child fourteen years ago; is subject to severe attacks of bronchitis; the periods are regular, but very profuse, and this is increasing. On examination, there is a post-uterine swelling, very hard, and found to be in part the fundus, and in part a supposed fibroid. The uterine sound passes three inches; she bleeds easily. She came as out-patient to the hospital on June 11th, 1873, and continued under treatment, getting rather worse than better, until April 30th, 1875, when, after slight dilatation with tangle tents, the cervix was divided posteriorly. The bleeding from the operation was very slight. The tumour appeared to descend a little, and to project, but it afterwards diminished in size, and became quiescent. From the date of the incision this patient experienced no excessive loss either at the menstrual or the intermenstrual periods, and this has been maintained to the present time. (Dec. 1876.) I heard this patient died suddenly about two weeks ago. She was found dead in the water-closet, and I should imagine death was in no way related to her uterine trouble.

Incision of the cervix, as practised by Simpson, Greenhalgh, and others, has been performed very frequently, so much so in some instances that it is understood that it has been even a common operation in the physician's consulting-room. This has been the recognised operation of dividing the cervix, or rather the inner os, with one of the variously contrived hysterotomes, and is applicable sometimes to dysmenorrhœa, some cases of flexions, the relief of sterility, &c. For the relief of the two last-named affections it has not been of late so frequently practised as on its first introduction into surgery. It, like many, if not most, new remedies, has had an ascent and a decline in popular favour, for it has even been thought by some to be the great panacea for nearly all uterine troubles. In dysmenorrhœa it has often done good, but often also the reverse, as, when the wound has healed, and a cicatrix formed, the symptoms have been aggravated, and the conditions increased for which the operation was performed. In sterility it has also failed, by leaving a too patent cervical and uterine cavity, which would not retain the seminal fluid. In flexion the incision might give relief by diminishing congestion, but would do little else to bring the axis of the uterine body into a line with that of the cervix. The relief thus given might more safely, and as efficiently, be given, as Dr. Peaslee suggested, by scarification or the application of half a dozen leeches. This last-named physician divides the operation into simple incision, as performed by Simpson, meaning a simple cutting into the cervix, and discission, by which is meant severing the cervix, or cutting through it entirely.

As to the mode of dividing the cervix, it is most simple. The cervix being drawn down by a vulsellum, a Sims' speculum having been previously inserted, a knife may be used to divide one or both lips, and the inner os be divided by a second cut with a probe-pointed knife or bistourie cachée; or the vaginal lips may be as easily divided up to the vaginal roof with scissors, thus dispensing with speculum and vulsellum; or Küchenmeister's scissors may be used, which has one blade long, and the other blade hooked, the hook being provided with a sharp point. I think the first method has the greatest advantage, as everything is done before one's eyes.

Graily Hewitt says "the incision must affect the whole of the cervical canal, including the internal os uteri."

Olshausen in 1874 writes upon the incision of the cervix uteri, and says it is suitably employed where dysmenorrhœa is dependent upon the small size of the inner os, or where sterility exists from the same cause. For the operation he prefers using Marion Sims's knife. To secure a good result the incision should be made high enough up in the cervix, and the vaginal portion should be cut through. To prevent the too rapid healing the best way is to break down the adhesions with the finger for the first two days, and then to pass the sound to break down adhesions where the fingers cannot reach.

Gaillard Thomas, in one of the procedures recommended by him in the treatment of fibroids, says: "The cervix is dilated with tents, its vaginal portion cut by scissors up to the vaginal junction, and the fibres of the canal making the os internum severed laterally by a delicate knife," &c. And again he says: "As these preparatory measures usually control hæmorrhage, further interference may be indefinitely delayed."

Graily Hewitt says: "The deep incision of the os and cervix alone is occasionally practised with the view of lessening or arresting the severe and exhausting hæmorrhages sometimes present."

Barnes says: "I have in so many instances practised this operation with advantage that I entertain no doubt of its value." He does not think the incisions should be carried deeply into the neck at the level of the os internum, nor that the tumour itself should be cut into.

As to the *rationale* of the efficacy of this operation in suitable cases there seems to be a variety of opinions. Graily Hewitt's explanation is that the hæmorrhage is arrested because no further accumulation of blood occurs. When the os is very small blood may collect from a clot which distends the uterus, and by and by induces contraction, and then expulsion. Just as is the case in abortion in the early months, the uterus is thus alternately full of blood and empty; the dilatation of the uterus becoming greater, the blood or clot is got rid of, but again accumulates. When the os is incised the blood oozes away readily, there is no accumulation, no stretching of the uterine wall, and hæmorrhage is lessened. Barnes considers that these incisions have their beneficial effect in modifying the nutrition of fibroid tumours.

Arrest of hæmorrhage is usually considered to be due to uterine contraction, though, by the way, this has been, in the *Practitioner*, denied by Dr. Hadden, who ascribes it to the effect of the vaso-motor nerves. The result of the contractions of the body of the uterus is to a considerable extent influenced by the condition of the cervix. It was the opinion of Baudelocque that an antagonism existed between the fundus and the neck of the womb, and that while one tended to displace the ovum, the other served to retain it. The contractions of the body going on during gestation, a process in which the cervix takes little if any part, have been clearly pointed out by Braxton Hicks and Playfair, and the same idea runs through a monograph recently issued by Dr. A. Crombie, who maintains that during pregnancy there is a constant endeavour on the part of the uterus to expel the ovum, while there is an equal effort on

the part of the cervix to counteract that endeavour. Then we see in parturition that the first attempts are usually in the painless, silent stage of dilatation, when the end in view is the opening the os rather than the downward pressure of the uterine contents; and, when active contractions have set in, as soon as the os is fully dilated—i.e., when the resistance of the cervix is entirely removed—that the uterus acts with greater and more effective expulsive power than it did even when the os was partially though not fully expanded.

May not the incision of the cervix act in a manner somewhat analogous—namely, by destroying the cervical contraction, and its antagonism to the body, and so permitting a more efficient contraction of the body? It is known that the same result occurs in some cases of uterine hæmorrhage, which is sometimes arrested by the simple dilatation of the cervix with a tent; and why is it that the administration of ergot is so much more efficient after than before the dilatation of the cervix, either in parturition or the expulsion of a fibroid?

Dr. Henry Savage, in the third edition of his Plates, says: "There is a functional antagonism between the uterine cervix and uterine body, to this extent at least, that contractility in the latter is powerfully promoted by dilatation of the former. Uterine hæmorrhage and the vitality of soft intra-parietal hyperplasms may often be beneficially, sometimes signally, controlled by incisions destroying the future contractility of the cervix."

Dr. Peaslee says, that in incision for sterility, when conception subsequently occurs, abortion often follows; but he does not say whether this result is due to increased and uncounteracted contraction of the body or to the literal falling of the ovum through the open internal os. The cessation of the hæmorrhage cannot be due to any direct effect which the cutting can have upon the tumour, as it is well known that the smallest tumours give rise to the greatest amount of bleeding, on account of there being in these cases a larger amount of free uterine surface to bleed from. And it would seem that the idea of the blood being either diminished or stopped, on the principle of the slight oozing which occurs from the incisions acting in the way of a derivative, would not hold good.

In uterine fibroids, where enucleation can be carried out, incision of the cervix is only a preliminary proceeding, resorted to not so much to relieve the hæmorrhage as to enable us to reach the tumour, and in suitable and successful cases the grandest results are occasionally to be obtained; but where this is not to be anticipated, the simpler proceeding may be, at all events at first, practised in the hope of its being sufficient; and in some few instances, if the patient can tide over the climacteric period, no further surgical aid may be required.

Birmingham.

CASE OF

ANURIA LASTING TWENTY-FIVE DAYS; RECOVERY.

By WILLIAM WHITELAW, M.D.

THE following extraordinary, and, so far as I know, unique case is of so unusual a character as to merit being placed on record.

In May last year, two out of six children, residing in a recently-built and well-constructed house in this neighbourhood, took scarlatina in a mild form, and made a good recovery. On returning from the seaside in the beginning of September the remaining four were attacked, three of them recovering well; but the fourth, a healthy boy, aged eight years, was the subject of the above very strange sequela. He was attacked on Sept. 11th, with marked throat symptoms and strawberry tongue; temperature never higher than 101°; rash almost imperceptible, and desquamation very slight. The existence of the other cases, however, left no doubt as to the diagnosis. He was quickly well, and, although not so strong as formerly, nothing particular was observed till Dec. 3rd, when his urine was observed to be scantier than usual; and on the 5th, on being called in, I found him apparently in perfect health—appetite better than usual, tongue clean, pulse 80, temperature 98·5°, and skin natural. There existed a little pain and tenderness on pressure over both lumbar regions; there was no swelling of face, hands, feet, or abdomen; and during the previous twenty-four hours he had passed ten ounces of urine, clear in colour, sp. gr. 1018, and free from albumen. He was ordered a hot bath; poultices over the kidneys; to drink as much fluid as possible; and a mixture of acetate of potash, squill, digitalis, and broom. On the 6th I found he had passed only two ounces of urine, but had perspired very freely after the bath. He was eating and sleeping well. On Dec. 7th there was voided only one drachm of urine; and *from this date till the 20th not one single drop*, and yet, with the exception of slight headaches, his general health continued excellent. During this time three or four liquid stools daily were procured by the exhibition of compound jalap powder, and diaphoresis was maintained by baths and poultices. On Dec. 19th Dr. Lumgair of Largo saw him in consultation, and could scarcely credit that suppression had gone on so long without the supervention of dropsy or any symptom of uræmic poisoning. He suggested vesication over the kidneys, and in twenty hours after the application of the blister two ounces of urine, free from albumen, had been passed; and I hoped that the kidneys were now roused from their state of torpor (for it seemed to be that, more than actual nephritis). No more urine was, however, secreted; and on the 27th the blister was repeated, but this time with no successful result. The baths, poultices, and jalap were now discontinued, in the belief that the urea was being removed by these means, and that, by ceasing diaphoresis and purgation, the kidneys might be *forced* to resume work. The diuretics were, however, continued. This change of treatment made no apparent difference. The bowels acted twice daily of their own accord, and the boy continued in excellent health. On the 31st December there appeared very slight œdema of the feet and ankles; and on the morning of January 2nd one drachm of urine was passed. On the same day, with the aid of Dr. Fraser, superintendent of the Fife and Kinross Asylum, electricity was applied to the spine and through the kidneys, and a small catheter was passed into the bladder, in the hope of exciting reflex action. On the 3rd and 4th January about the same quantity was passed daily; and on the 5th a whole pint was voided in small quantities at eight different times. Since then the kidneys have acted well, and the boy has (Jan. 12th) quite recovered.

The following points seem of interest:—1. Twelve weeks elapsed from the date of taking scarlatina (which was of a very mild nature) till the suppression took place. 2. With the exception of two ounces passed on the thirteenth day, there was complete anuria for twenty-five days. 3. Except slight headaches, and latterly slight œdema, there were no uræmic or dropsical symptoms throughout. 4. There was no albuminuria and no febrile action. The kidneys seem to have been in a state of torpor, and their work must have been carried on by the bowels, skin, and to some extent by the lungs. 5. It is hard to say what share the treatment had in the final happy result. Vesication at first seemed beneficial, but a second trial had no such effect. Then one drachm of urine was passed before the application of the battery, and therefore the credit cannot be entirely due to it. Probably, ceasing diaphoretics and purgatives, and thus throwing the entire duty of excreting the urea on the kidneys, was the best line of treatment that could be adopted, although at first sight a somewhat risky proceeding.

I may add that the boy was closely watched, night and day, by his parents and the servants, and was offered rewards to induce him to micturate; so that the idea of deception cannot be entertained. Drs. Lumgair and Fraser, although at first sceptical, are as much convinced of the genuineness of the case as I am myself.

Cupar, Fife.

ACCORDING to the medical officer's report, read at the last meeting of the Liverpool Workhouse Committee, there were twenty-nine cases of typhus fever in the infirmary, of which one had been fatal. During the week five deaths, out of the total number of eighteen, had resulted from typhoid.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF FARCY.

(Under the care of Dr. DICKINSON.)

FOR the notes of this interesting case we are indebted to Dr. Isambard Owen, medical registrar.

A stableman, aged twenty-six, was admitted on June 8th, 1877. There was a family history of cancer. Excepting attacks of winter cough, the patient was of sound constitution. He had had no privations. He was accustomed to take three or four pints of beer daily, but not in the habit of exceeding this amount. He was in contact with glandered and farcied horses for five or six months previous to the commencement of the disease, and for thirty-one days subsequently. Except his customary cough, which had been present since November, and which did not undergo any increase during the progress of the malady, his health prior to the attack was good.

The onset was sudden, with languor and with shivering, which lasted till he went to bed and slept. Next morning an inflamed lump appeared on the front of the left forearm, not, as far as could be ascertained, at the site of any previous lesion. From that time he suffered from weakness, anorexia, wasting, and profuse hot night-sweats. The bowels were costive, and the urine high-coloured. The lump on the forearm enlarged, softened, and developed into an abscess.

On the twenty-fifth day, pain came on in the calves and the left knee, and on the thirty-second day, the pain in these regions became aggravated. On this day the man attended as a casualty patient, and the abscess on the forearm was opened by the house-surgeon. On the thirty-ninth day, on rising in the morning, a lump, of the size of a hazel-nut, was found in the upper part of the left calf, and later in the day he was admitted an in-patient. He was then much emaciated; the cheeks were flushed; the lump in the calf was tender to the touch; the left knee, though neither swollen nor red, was hotter to the feel than its fellow. The remains of the ulcer appeared as a deeply excavated wound the size of a sixpence, at the bottom of which the tendons lay exposed. Iodide of potassium, with sal volatile and bark, was administered, and lead opiate lotion was applied to the knee. On the fortieth day the man's condition was not materially changed; the temperature in the evening was 103° Fahr. On the forty-first day the morning temperature was 100·4°; evening temperature 103·4°. The knee was less painful, and the bowels were opened, the first time for five days. On the forty-second day, the morning temperature was 102·4°, evening 103·6°. There was neither pain nor tenderness in the right calf, but the left calf was very painful. On the forty-third day, the morning temperature was 102·4°, evening 104°. There was no pain except in the left knee on movement. The right eyelids and surrounding parts were inflamed and greatly swollen. Just above, on the forehead, were two inflamed but painless indurations, each the size of half a pea, situated in the subcutaneous tissue. Ordered three grains of quinine and fifteen minims of tincture of perchloride of iron every four hours, with a daily allowance of eight ounces of port wine. On the forty-fourth day, the morning temperature was 102°, evening 103°. One of the frontal lumps enlarged. Six ounces of brandy given in addition. On the forty-fifth day, the morning temperature was 102°, evening 105°. The eyelids were harder, exhibiting a number of irregular flat purulent heads. The frontal lump was also pustular. Diarrhœa and delirium commenced. At 3 P.M. a rigor occurred, which lasted five minutes, and was accompanied by violent delirium. At 7 P.M. a second rigor, slight. On the forty-sixth day, the morning temperature was 103°, evening 104°. The purulent heads were more numerous, and confluent. There was a small pustule on the right cheek, and another on the left forearm. A third lump had appeared on the forehead. Delirium continued, and the motions became involuntary. The allowance of brandy was doubled. On the forty-seventh day numerous small pustules had appeared over the surface of the whole body, especially on the extremities. Inflammatory patches of skin were seen about the feet and the left knee, and in other parts. A red fluctuating swelling surrounded the knuckle of the right mid-finger. There were profuse diarrhœa, restless delirium, agitation and tremulousness. The dose of quinine was augmented to eight grains, bark and acid being substituted for the iron. Death occurred at 4.30 P.M.

The night-sweats continued in the hospital. The pulse ranged from 80 to 90 on admission, and did not exceed 120 afterwards. Weak at first, it gradually increased in vigour and tone, and became hard and strong on the forty-third and forty-fourth days. It then progressively decreased and softened until, six hours before death, it was no longer perceptible. The urine from the forty-second day, as long as it could be collected, was found to be slightly albuminous.

No nasal discharge occurred during the case. There was no history given of glandular enlargement, but the glands in the left axilla had a shotty feel under the fingers.

At the autopsy it was found that the edges of the wound on the forearm were so far undermined as to form a cavity 5 in. by 3 in., the floor of which was the bare muscles. The cavity contained neither pus nor pyogenic membrane. The neighbouring parts were unaffected. On the lower part of the right popliteal space was an abscess containing about five ounces of thick pus. The right knee-joint was distended with semi-purulent synovia; the synovial surface of the ligamentum mucosum was congested; under this ligament there was a small collection of pus in connexion with exposed bone. The cartilages and the rest of the synovial surface were natural. The whole of the medullary canal of the right femur was filled with grumous pus. The cancellous tissue of the upper end was red and inflamed, at the lower end infiltrated with pus. No inflamed or blocked vein was found in any part, nor was there any material affection of the lymphatic glands beyond slight enlargement and increased vascularity of those in the left axilla. There were a few bands of adhesion in the right pleura. The lungs were congested, intensely so at the apices, but not sufficiently to make them sink in water. On the surface of both, at the least congested part, appeared a few nodules of the size of a small pea and under, resembling the usual deposits of pyæmia in possessing red areolæ and yellow puriform centres, but differing from them in the absence of any pleuritic false membrane. The progress of decomposition in the congested portions was sufficient to mask the presence of such nodules had any existed there. The heart weighed eleven ounces; a firm currant-jelly clot filled the right auricle; the other cavities were empty and partly contracted. The tricuspid opening admitted five fingers; the mitral valves were slightly thickened. The aorta was free from disease. The liver was pale and rather tough, the gall-bladder nearly empty. The brain was congested and rather soft. The spinal cord was softer than natural; the posterior ganglia much congested; the anterior plexus of veins loaded with blood. The spleen was softer than usual; the Malpighian bodies not apparent. There was slight congestion of the kidneys, larynx, stomach, and duodenum. The mucous membrane of the bronchi was delicate, and free from congestion.

NORTH-WEST LONDON FREE DISPENSARY FOR SICK CHILDREN.

DISLOCATION OF THE RIGHT FEMUR INTO THE OBTURATOR FORAMEN IN A CHILD.

(Under the care of Mr. H. CRIPPS LAWRENCE.)

G. M——, aged four and a half years, came under observation on April 7th, 1877, at the dispensary. As he limped into the consulting-room he stepped forward, bending the trunk of his body so that the right leg appeared considerably longer than the left one; the right foot pointed for-

wards. The motion of the right thigh, though limited, appeared independent of the motion of the pelvis.

Towards the middle of April the patient was admitted into the children's ward of the London Diocesan Deaconess Institution, Westbourne-park, to which Mr. Lawrence was then officially attached.

Examination after admission revealed abduction of the right thigh and leg in the supine posture. On manipulation adduction was found greatly diminished, flexion very limited, circumduction impracticable. The length from the right anterior superior iliac spine to the right external malleolus was two inches more than the corresponding measurement on the left side. Over the site of the right obturator foramen marked fulness and resistance were evident on comparison with the left side, and on turning the patient prone the right buttock, though comparatively flattened, was but slightly increased relatively in width. The right trochanter major was below and to the inner side of the acetabulum, and on deep pressure the right cotyloid cavity could be readily defined. Lastly, there was a comparative increase in the length between the anterior superior iliac spine and the trochanter major on the right side.

It was concluded that the head of the right femur was dislocated downwards into the obturator foramen.

On April 25th an attempt at reduction by manipulation proved unsuccessful.

On May 2nd chloroform was administered by Mr. J. R. Lynch. Dr. Hett fixed the pelvis towards the left side by a jack-towel looped as a slip-knot, and Mr. Lawrence then abducted the right femur to liberate the head of the bone; after this the femur was flexed at right angles with the trunk, and rotated forcibly from within outwards. Dr. H. B. Dow now maintained counter-extension with a perineal band upon the upper end of the femur, upwards and outwards, while the reduction was completed by bringing the femur, with slight extension, vertically downwards, until the knee, by pressure from above it, reached the level of the bed. No snap was audible, as occurs sometimes in the reduction of dislocations in the adult, but during the latter part of the manipulation modified crepitus could be felt as the head of the femur regained the acetabulum.

The success of the reduction was evident in that the length of the limbs was equal, the level of the patellæ corresponded, and circumduction was practicable. A long splint, with a perineal band, was applied.

On May 4th the boy managed to loosen the bandages with his left foot and to remove the splint. Slight lengthening, to half an inch, was now noticeable. This was transient, due probably to temporary effusion about the joint and swelling of the ligaments (Chelius), aided by the rupture of the ligamentum teres, occasioned by the accident. On May 9th the length of the limb was normal, and continued so afterwards.

Mr. Lawrence saw the boy at the Children's Dispensary for a few weeks subsequently. Though some stiffness remained for a short time, he gradually regained considerable locomotor power, and in two months from the time of the reduction of the dislocation he could walk about easily with the aid of a stick.

Remarks by Mr. LAWRENCE.—No definite information could be obtained respecting the accident beyond the fact that on March 17, 1877, the boy, while playing with a schoolfellow, was pushed by him from a doorstep about a foot from the ground. He was seen to limp home, and on washing him next morning his mother noticed something wrong with the right thigh. The date of the accident is important; for it enables us to calculate that fully six weeks elapsed between the occurrence of the dislocation and the reduction of it on May 2nd, 1877.

Dislocation of the femur into the obturator foramen is a comparatively rare accident in adult life; in childhood it is still more so. Mr. Bryant, in his "Practice of Surgery" (second edition, p. 338), quotes a case reported by Mr. Powdrell (LANCET, 1868), in whose practice this dislocation occurred at the age of six months, and was reduced by manipulation. This form of dislocation may simulate incipient morbus coxæ. The late Professor Miller indicated the necessity of great care on this point, urging that the differential diagnosis would be based on the real or apparent elongation of the limb, the presence or absence of an elongation of the space between the anterior spinous process of the ilium and the trochanter major. The case here recorded establishes the occurrence of this form of dislocation in a boy at the age of four years and a half, and that reduction by manipulation may be accomplished even at the end of six weeks and a half, with a good result.

BIRMINGHAM HOSPITAL FOR WOMEN.

AN EXCEPTIONALLY DIFFICULT CASE OF OVARIOTOMY.

(Under the care of Mr. LAWSON TAIT.)

B. G——, aged thirty-five, was sent to Mr. Tait by Mr. Horsfall, of Wakefield, on account of an ovarian tumour which had been growing for two years, and in the history of the last three months of its progress there were indications of recurrent peritonitis. This appeared to be the probable explanation of the remarkable peculiarity in the case that a note of intestinal resonance could nowhere be obtained. Careful examination made it evident that there was an ovarian tumour, though at first sight the case really looked like one of ascites, and the absence of the intestinal note made it probable that the stomach and intestines were all behind the tumour.

On March 24th Mr. Tait proceeded to remove the tumour, and found that adhesions existed to all the viscera except the right kidney. The tumour was attached to the liver and spleen, to the anterior surface of the stomach, the whole of the omentum, several coils of small intestine, the left kidney, and all over the parietes on every side as far as the brim of the pelvis. The adhesions were firm, and bled freely, and several large vessels had to be tied. The fimbriæ of the left Fallopian tube were glued on to the posterior surface of the tube. The pedicle was quite six inches wide, and along its left side lay an enormous spermatic vein, quite as large as a finger, imbedded in adhesions, and which required the greatest care to isolate it without injury. The pedicle was secured by a clamp, the abdomen was carefully cleaned out, and the wound closed after an operation which occupied quite two hours.

The patient suffered severely from shock, but, thanks to the timely administration of some champagne, she rallied. She had no further symptoms which caused anxiety. The clamp came off on the tenth day; she got up on the fifteenth, and went to the country nineteen days after the operation in a condition of convalescence.

Another noteworthy feature in the case is that the tumour consisted of an immense sac, with only a small mass of the original tissue of the ovary included; but this was undergoing cystic distension, so that the tumour was not unilocular. Mr. Lawson Tait has already expressed the belief (Hastings essay) that ovarian tumours are never unilocular, but that all unilocular growths are of parovarian origin.

BRISTOL ROYAL INFIRMARY.

THREE CASES OF SUDDEN DEATH FROM HEART-DISEASE.

(Under the care of Dr. R. SHINGLETON SMITH.)

CASE 1.—H. S——, aged thirty, tailor, married, admitted on October 26th, 1876, with cardiac symptoms. He had had fairly good health all his life. No history of rheumatism or syphilis. Six months before he began to complain of shortness of breath, and has done no work for four months. The breathing had been getting worse for some weeks, and he has felt palpitation. Two months ago his feet began to swell.

On admission there was orthopnœa; he could scarcely answer questions, and the nostrils dilated widely. Face swollen, dusky in colour; eyelids œdematous. Both legs swollen; no ascites. Hepatic dulness increased; upper line pushed down the width of two ribs. Percussion note dull at bases of both lungs behind, and fine crepitation up to the angle of scapula. A loud systolic bruit was heard all over the cardiac area, loudest over sternum between the third costal cartilages. Impulse diffused and indistinct; apex-beat not visible; very little cardiac dulness. Considerable epigastric pulsation; great enlargement of and visible pulsation in the veins of the neck on both sides.

Towards the left axilla clear normal heart-sounds could be detected. No bruit at the angle of scapula. Pulse very small, almost imperceptible; not to be counted at wrist. Urine small in quantity, high-coloured, sp. gr. 1025, containing a trace of albumen and of bile. No arcus senilis was present. He was ordered fifteen drops of tincture of digitalis, five grains of carbonate of ammonia, in an ounce of acetate of ammonia mixture, every four hours, and to have thirty grains of compound jalap powder at once.

On Oct. 28th it was noted that the pulse intermitted occasionally; heart's pulsations 96 per minute. On the 31st a faint diastolic bruit over aortic valves was for the first time detected.

Nov. 1st.—The lung-sounds had much improved; percussion at bases normal; no moist sounds present. The œdema of the legs had quite disappeared. The breathing was much easier, he could lie much lower in the bed, and the dusky colour of face was less marked. The pulse, about 70, was regular; it had much improved in volume and in strength.

3rd.—At 12.30 P.M. he seemed to be still improving. Pulse was 60, but it intermitted frequently. The heart's action seemed weak, but the patient made no complaint of faintness. There was no sweating or vomiting. He was cautioned against sitting up or exerting himself, and the digitalis was omitted from the mixture. At 5.30 P.M. he got out of bed, and, whilst sitting on the night-chair, was seen to fall forwards suddenly, and was taken up dead.

Autopsy, eighteen hours after death.—Both pleural cavities and the pericardium contained a quantity of clear serum. Heart much enlarged; left ventricle immensely hypertrophied, its walls being nearly an inch in thickness; the cavity not much dilated. The aortic valves were adherent, together forming a small ring not more than a quarter of an inch in diameter. This aortic ring was inflexible, containing much calcareous matter, with spicules projecting into the cavity. The mitral chordæ tendineæ were much thickened, and the mitral orifice dilated, admitting three fingers. The right ventricle was much thickened, but not distended. The tricuspid orifice admitted five fingers. The left ventricle contained black clot, but the right cavities were empty. The lungs were emphysematous along the anterior margins, were crepitant everywhere, and not congested. The liver, spleen, and kidneys were harder and firmer than in health, but were not much congested.

CASE 2.—J. H——, aged fifty, gardener, was admitted on Nov. 21st, 1876, with anasarca. Twenty-seven years ago he had rheumatic fever, was laid up fifteen weeks, but got quite well, and continued so till four months ago, since which time he complained of cough and shortness of breath. A month ago swelling of the feet was first noticed.

On admission, he complained of dyspnœa, being not able to lie down in bed. There was considerable œdema of both legs as high as the knees, but no ascites. Breathing almost wholly abdominal. No heart-dulness. First sound at base of heart is prolonged. Breathing weak at bases of both lungs, but no dulness. Urine clear; specific gravity 1011; albumen about one-sixth. Ordered five grains of carbonate of ammonia, one drachm of spirits of nitrous ether, in an ounce of camphor mixture, every four hours, and to have thirty grains of compound jalap powder at once.

On Nov. 22nd the œdema had diminished. A decided systolic bruit was heard at the cardiac base, and conducted along the vessels; the second sound at the base was clear and sharp as usual. At the apex the sounds were normal. Pulse rather full, but weak, 108 per minute.

On the 28th there was no swelling of the legs remaining, and the breathing had much improved.

Dec. 8th.—The heart's action was found to be very rapid and irregular; the pulse had also a jerking character. The systolic bruit at the base had become much rougher in character, and a soft diastolic bruit had become audible. He was ordered fifteen drops of tincture of digitalis, in an ounce of perchloride of iron mixture, three times a day.

9th.—The pulse had become quite regular, 92 per minute.

19th.—It was noticed that no pulsation could be detected in the left radial artery, whilst in the right pulsation was much fuller and stronger than previously. The patient had complained of "rheumatic pains" down the left arm for two or three days before, but he had continued to use the arm as usual, and had not complained of any coldness or want of power.

21st.—Very feeble pulsation could now be detected in the left radial artery. The right radial had now the typical character of aortic regurgitation. The digitalis was discontinued, and he was ordered citrate of iron and quinine.

26th.—Breath was not so well. More cough and expectoration. Pulse 104, full and collapsing. Now a loud double bellows sound at base of heart, increasing in intensity from day to day. He complained of a feeling of numbness and weakness down the left arm; a hard mass could be felt at the bend of the elbow where the brachial artery bifurcates, and pulsation in radial at wrist was scarcely perceptible.

Jan. 15th.—A little œdema of the legs again present. Since last note he had been up the whole day, and was able to get about the ward. Was taking digitalis and iron. A trace of albumen in urine.

20th.—Œdema increasing. Was ordered thirty grains of acetate of potash, fifteen drops of tincture of digitalis, with one drachm of spirits of nitrous ether, three times a day.

23rd.—Got up as usual, but at 12.30 was found to be not so well. Pulse much quicker and more compressible than before. Complained of acute pain in right side of chest (over middle lobe of right lung). Patient was sent to bed, but at 10.30 P.M. he got out to sit on the night-stool, and whilst doing so suddenly expired.

Autopsy, thirteen hours after death.—Heart: Left ventricle thickened, and full of dark-coloured clot; right ventricle also hypertrophied, but empty. Aortic valves two in number, both very large; the third not manifest. The edges of the two large valves were much thickened, and the surface roughened; one of them was dilated to form an aneurismal pouch projecting back into the ventricle, but not yet ruptured.—Lungs: Right middle lobe contained three or four large recent embolic patches, each of which was swollen, and projected above the surrounding lung-substance; the pleural surface over them had on it a few flakes of recent lymph. The lungs were emphysematous throughout. The left radial artery was blocked by a firm pale embolus, at its commencement in front of the elbow; below this was a thin line of pale coagulum, less firm in consistence than the hard granular embolus. The liver, spleen, and kidneys presented no indications of embolism, nor were they much congested. Their consistence was firmer than in health, but they were otherwise fairly healthy.

CASE 3.—R. L. M——, aged forty, was admitted on Jan. 17th, 1877, with cardiac symptoms. Sixteen years previously he had pains in his joints, but was not laid up in bed, and seemed to recover perfectly. This was the only obtainable history of rheumatic symptoms. There was no history of rheumatism in his family, and no history of syphilis in himself. He was a confectioner, and thought that a damp bakehouse may have given rise to his illness. He had been accustomed to take alcoholic liquors freely of late, and had a great deal of business anxiety and worry. This illness commenced four months before admission, with shortness of breath coming on in paroxysms. He continued work till a week before, but he was able to do very little. He noticed swelling of feet only during the last four days.

On admission, he was a spare man, the countenance was dusky and the lips blue. He sat up in bed, unable to lie back. There was considerable dyspnœa and slight œdema of both legs. Pulse 96, full, visible, locomotive. Mucous râles at base of both lungs, but no percussion-dulness. Heart's impulse diffused; little cardiac dulness; loud double bruit at base; the systolic very rough in character. Urine pale, sp. gr. 1012, no albumen. He was ordered ten drops of tincture of digitalis, thirty grains of acetate of potash, and one drachm of spirits of nitrous ether, every four hours.

Jan. 19th.—He had a severe attack of dyspnœa, not relieved by morphia hypodermically. Pulse very irregular, could not be counted. Blueness of face very considerable. The digitalis was doubled in quantity and combined with carbonate of ammonia.

20th.—Blueness less marked; breathing much better; pulse regular, 100; the œdema of the legs had subsided.

21st.—The pulse had come down to 60, was again very irregular in action, and frequently intermitting; the digitalis was therefore diminished to half doses three times a day.

23rd.—Breathing was again worse; he could not lie down. Pulse still irregular, at about 80. The digitalis mixture was ordered in twenty-drop doses three times a day.

25th.—He was much better, and got up. Pulse 90, regular.

29th.—Was feeling pretty well. Pulse quite regular, fuller and more resisting than before.

Feb. 3rd.—He complained of feeling weak, and was disposed to ramble in his talk. Pulse 90. The legs again swelling a little, the digitalis mixture to be reduced to half doses three times a day.

5th.—The pulse was again very irregular. Had not been able to sleep, and was delirious through the night. Less œdema of the legs.

6th.—Was not so well; could not eat his dinner as usual. At 7 o'clock P.M. he got out of bed, and sat on the night-stool. His head was seen to fall forwards, and before the nurse could reach him he fell on the floor, and died almost immediately.

Autopsy, seventeen hours after death.—The heart was found to weigh twenty-four ounces; the left ventricle was much enlarged, its walls being immensely thickened, and the cavity dilated. The left side was full of black, semi-clotted blood; the right cavities empty. The mitral orifice looked healthy, but the aortic valves were much diseased. The semilunar valves were—two small, one very large—all much roughened and thickened at the edges; the large valve was converted into a thickened band, its outer part having been dilated into an aneurismal pouch, which had given way, leaving a large jagged opening into the ventricle, the edges of which had a quantity of black clot adhering loosely. On the auricular surface of the anterior cusp of the mitral valve was a rounded projection with thin walls, an extension from the aneurism of the large semilunar valve of the aorta. The right ventricle was rather thickened, but not dilated. The aorta was extremely atheromatous. The lungs were very large, highly emphysematous, unusually pale, bloodless, and very crepitant universally. Both pleural cavities contained a collection of clear serum. The liver looked healthy; there was no congestion of hepatic vessels. Spleen and kidneys were healthy, and contained little blood. One small cicatrix (from cyst?) was observed at surface of one kidney. There were no evidences of recent or old emboli.

Remarks by Dr. S. SMITH.—The three cases briefly described are chiefly interesting from the fact that death occurred suddenly in all of them. In each case the aortic orifice was the seat of the principal disease, the chief difference being that in one case (that of H. S——) the condition was "obstructive" in its effects, in the other two cases there must have been copious "regurgitation." In the case of E. L. M—— it seems probable that the immediate precursory condition which caused sudden death was over-distension of the left ventricle, resulting from sudden rupture of the thin aneurismal pouch in one semilunar aortic valve. In the case of J. H—— a similar aneurismal pouch existed in one of the aortic semilunar valves, but rupture had not occurred. In all the cases the left cavities were found to be distended, the right cavities comparatively empty, the lungs pale, and the other viscera not congested as they usually are in cases of chronic heart disease, although their texture indicated a previous prolonged congestive condition.

The cases give strong support to the views advocated by all recent writers on the heart, that (in the words of Dr. Walshe) "there is one amongst the number of valvular impediments of which the tendency to kill instantaneously is so strong that the fact must always be borne in mind in estimating its prognosis, and that is aortic regurgitation."

The case of J. H—— was especially interesting, as the progressive character of the disease could be traced from day to day in the alterations of the cardiac sounds, and the effects of embolism could be traced both as regards the radial artery and, just before death, in the middle lobe of the right lung.

BEQUESTS, &c., TO MEDICAL CHARITIES.—Mr. John Arnold, of Jermyn-street, bequeathed £1000 each to St. George's Hospital, the Metropolitan Free Hospital, and the Westminster General Dispensary.—Mrs. Sarah Hinton bequeathed £1000 each to the Eastern Dispensary, the Royal United Hospital, and the Mineral Water Hospital, and £200 to the Eye Infirmary, all at Bath.—Messrs. John Hick and John Kynaston Cross, the M.P.s for Bolton, have each given £200 towards the proposed new Infirmary there.

Reviews and Notices of Books.

A Treatise on Chemistry. By H. E. ROSCOE, F.R.S., and C. SCHORLEMMER, F.R.S., Professors of Chemistry in Owens College, Manchester. Volume I.: The Non-Metallic Elements. London: Macmillan and Co. 1877.

WE have now, or shall have when the book is finished, the complete treatise on Chemistry which has so long been needed. Text-books, large and small, we have in abundance, some of them good, and some very bad. We have also an invaluable, though somewhat imperfect, dictionary, and we have treatises, excellent in their day, but now to some extent antiquated. But it has been left to the Owens College professors to produce a work which shall, with adequate illustration and in sufficient detail, represent the present state of chemical science and chemical industry. The volume before us is so excellent in every respect, and so full of matter, that its appearance may almost be considered as an epoch in English chemistry.

As the title-page informs us, the whole volume of nearly 800 pages is devoted to the non-metallic elements. The arrangement is very simple. An introduction gives a tolerably full and very interesting sketch of the history of chemical discovery. This is supplemented throughout the book by notices of the history of all the elements and all the more important of the compounds described. In some cases—as, for example, with regard to the discoveries of Lavoisier, Priestley, and Torricelli—figures of the actual apparatus used are given. Then follow some fifty pages devoted to a lucid account of general principles, the laws of combination, diffusion, the kinetic theory of gases, and the like. Then comes the detailed account of the non-metallic elements and their compounds, which constitutes the chief bulk of the volume; and, lastly, a compact monograph of over forty pages on crystallography. Throughout the book our knowledge has been brought down to the latest possible date, and it is evident that no labour has been spared in the consultation of original memoirs. Few new discoveries of any importance are omitted; the manufacturing processes described are those in present use, and many an antiquated method and oft-repeated blunder have been swept away. The accounts of the manufacture of iodine and bromine, of sulphuric acid, of carbon disulphide and of coal-gas, may be taken as examples of the more practical, while the section on chemical combination is perhaps the best of the theoretical, portions of the book.

As might have been expected from such experienced lecturers, we find much space given to lecture illustrations. Many of these are novel and interesting, and the drawings which accompany them are so well executed that there is no difficulty in understanding them. Altogether, the book will be of great value to professional chemists, and we can only hope that the other volumes will not be long in making their appearance.

The Examiner in Anatomy. By ARTHUR T. NORTON, F.R.C.S. Smith and Elder. 1877.

Examination Papers for the Use of Medical Students. Compiled by W. J. H. LUSH, F.L.S. London: J. and A. Churchill. 1877.

EVERYONE who has had much experience in examining must be well aware that the failure of many candidates to satisfy their examiners is due not so much to want of knowledge as to want of order and system in the mode in which the questions are answered. This is especially the case in written examinations. It is extremely difficult for one who has had no practice in writing to begin an answer. We have seen men, by no means ill-informed, nibbling the

ends of their pens for a quarter of an hour in the vain endeavour to commence the answer to a plain question with a well-rounded period. It is not uncommon to find that the candidate has entirely failed to perceive the scope of the question, inserts much that has not been asked, and fails to give those points the knowledge of which the question has been contrived to elicit. We are quite in accord, therefore, with Mr. Norton in the importance he attaches to the habit of answering papers; the suggestions that he gives to students are very instructive, and should be practised by all those who are about to present themselves at any public examination—viz., 1st, that each question should be read over several times until its direct bent is ascertained; 2nd, that a number of heads should be written upon a slip of paper, and after deliberation arranged numerically according to their respective importance; and 3rd, that the answer should consist of a full development of the several heads. The plan Mr. Norton has adopted is to give a considerable number of questions on the several systems of organs, as on the bones, myology, angeiology, &c., each question being followed either by a brief indication of the mode in which it should be attacked or by a detailed answer. Some of the former class of notes might, we think, have been advantageously omitted, whilst some of the latter might have been expanded. For example, Question No. 14 runs thus: "(*a*) Describe the articular ends of the bones and the ligaments which compose the elbow-joint; (*b*) State the attachments and relations of the muscles to these structures; (*c*) State the arrangements of vessels and nerves which are in relation to and supply the joint." The commentary on this is: "In this question is required a description of the elbow-joint and of the muscles and anastomoses around it." Surely, a piece of tautology, giving little help to the student. The same may be said of Questions 15, 20, and others of this section. On the other hand, not only are many of the questions very well put, but they are excellently answered. The book will be found serviceable, and may be very advantageously worked through by all who have had one winter's dissection.

Mr. Lush's *brochure* includes a series of several hundred questions on the various subjects of Anatomy, Physiology, Chemistry, Materia Medica, Botany, Forensic Medicine, Midwifery, Surgery, Medicine, and Comparative Anatomy, collected from those set by various examining bodies, which the student who has read Mr. Norton's suggestions as to the mode in which he should reply to them, will do well to purchase, and having written them out, either submit his answers to one of his own better-informed friends, requesting him to point out errors and defects, or compare them with his text-book.

Etude sur le Spina Ventosa. Par EDOUARD GOETZ. Paris: Baillière. 1877.

M. GOETZ considers that the term "spina ventosa" is one that should be limited to a disease peculiar to children more or less affected with scrofula, manifesting itself almost exclusively in the diaphyses of the long bones of the foot and hand, and characterised by a painless swelling pursuing a chronic course. This disease he regards as a chronic oste-omyelitis, the alteration of the medulla being primitive (fungous degeneration of the medullary tissue), that of the osseous tissue itself secondary (expanding osteitis), whilst the alteration of the periosteum is consecutive to both, and is a chronic periostitis. He recognises two periods of the disease, (1) that in which the swelling is indolent without alteration of the skin, and (2) that in which there is ulceration of the skin with protrusion of the fungous portions from the centre of the medullary canal. In regard to its diagnosis M. Goetz gives the means by which it may be distinguished from frost-bites, strumous and syphilitic dactylitis, enchondroma, exostosis, caries, and white swelling of the joints. He states that the result is a return to a healthy condition, though the bone may undergo necrosis. In the treatment, therefore, this should be kept in mind, and ablation should only be proposed in the last extremity.

Journal of Anatomy and Physiology. Vol. XI., Part IV. Edited by G. M. HUMPHRY, WM. TURNER, MICHAEL FOSTER, and WM. RUTHERFORD. July, 1877. London: Macmillan and Co.

THE present part contains several valuable memoirs, of which the most important are:—1. The Formation of Fat in the Animal Body, by Dr. Lawes and Dr. Gilbert, to which we intend to refer at large. 2. The Influence of Salicin on the Healthy Body, with especial reference to its influence on the temperature, by Dr. Ringer and J. S. Bury. 3. The Cranial Osteology of Amia Calva, with a plate, by T. W. Bridge. 4. Experiments on the Biliary Secretion of the Dog, by Prof. Rutherford and M. Vignal; third series, embracing the action of sodium sulphate, magnesium sulphate, potassium sulphate, sodium phosphate, Rochelle salt, sodium chloride, nitro-hydrochloric acid, &c. 5. A description of a Sulu Skull, by Prof. Cleland. 6. A Continuation of the Memoir on the Development of the Elasmobranch Fishes, by F. M. Balfour. 7. The Quantitative Relation of Light to Sensation, by B. Thompson Lowne. 8. The Vaso-motor Nerves of Striated Muscle, by W. H. Gaskell. 9 Note on the Effect of Heat on the Heart's Action in the Chick, by Prof. Cleland. 10. Note on Mr. Gordon's paper "On certain Molar Movements," by Coutts Trotter.

MEDICAL ASPECTS OF THE WAR.

FROM the Caucasus we receive information that the system of tent-hospitals, introduced by Professor Pirogow, has proved eminently successful. It is not quite clear whether the hospitals here referred to are formed of Tartar tents, as suggested by Dr. Piotrovsky (see THE LANCET, July 28th, 1877, p. 129), but we believe that to be the case. From the 26th April to the 13th July the total number of wounded under treatment in the Russian army at the seat of war in Asia was 2700, and of this number 79 only, it is stated, died. The hospital accommodation provided in the Caucasus for the army amounts to 13,000, and of this number 8000 are distributed in 34 temporary hospitals of from 210 to 400 beds each. It is especially noted of the military hospitals proper that if they do not furnish the luxuries for the sick and wounded which are to be found in special ambulances, they do not fail of anything that is necessary for the well-being of the patients.

In addition to the ambulances of the Russian Red Cross at work in Asia, there are the ambulance organised by the nobility of Moscow (120 beds), the ambulance sent from Finland, the Dutch ambulance, and the ambulance of the Grand-Duchess Olga Feodorovna (150 beds). There is also the Sanitary Corps formed at Dorpat, and which is under the direction of Dr. Reyher. This corps has charge of the Red Cross encampment at Alexandrol, where the seriously wounded are alone received. A correspondent of the *National-Zeitung* (Berlin) describes the arrangement of this ambulance in glowing terms. It consists in the main of large hospital marquees, capable of being fully and freely ventilated, and each containing 13 beds; the bedsteads of iron, the matresses of horsehair, the pillows stuffed with feathers, and the linen of unimpeachable whiteness. Even the linen used for the wounded excites the admiration of the correspondent on account of its extreme cleanliness,

and he is not less gratified with the arrangements for the food, the drink, and the amusement (when this is practicable) of the patients, provision being made of books, tobacco, &c. None of the resources of surgery fail in the ambulance, and the hygienic care of the sick, with a view of preventing pyæmia or typhus, is carried out with the greatest strictness. In the cleansing of wounds a mixture of carbolic acid and water is invariably used, and especial care is given to the ventilation of the tents. The treatment of the officers differs from that of the private soldiers simply in the fact of a less number being placed in a tent. Smaller tents, each adapted for two beds, appear as a rule to be set apart for the officers. The attendants in this ambulance, as well male as female, as in several of the others, consist largely of members of noble and wealthy families. The correspondent observes that the common soldier treated in this hospital finds a luxurious state of things such as had never entered into his wildest dreams, and the contrast must indeed be great between ambulances thus managed and the ordinary military ambulance. But at least the ambulance described is free from Professor Pirogow's reproach, for all its comparatively luxurious provisions are devoted solely to the soldiers and officers who have been most severely injured.

The staff of the Russian Red Cross Society in Roumania consists of 2 principal medical officers, 1 oculist, 14 physicians, 16 students of medicine (9 male and 7 female), 23 first-class and 13 second-class assistant-surgeons, together with 10 assistant-surgeons (women), and 21 sisters of charity.

The Turkish Government has caused the following notice to be issued:—"The Imperial Ottoman Embassy, having been instructed to engage twenty more English surgeons for the Ottoman Army, and having already secured the services of twelve of them, hereby notify that English medical gentlemen desirous of filling up the remaining eight vacancies should apply, personally, at the Imperial Ottoman Embassy, 1, Bryanston-square, before the 30th of this month."

Excepting the labours of the staffs of the different English Aid Societies with the Turkish army, little favourable is reported as to the state of the sick and wounded south of the Balkans and in Asia. The Commissioner of the National Aid Society reports that Dr. Leslie's division did much hard work at Shipka; Dr. Crookshank's division was with the Turks before Popkoi, and during the week ending the 1st Sept., treated 495 sick and wounded. Dr. Hope's division is at Dervish Pasha's head-quarters, near Batoum, with its hospital-tents full of wounded. Large numbers of wounded are passing into Constantinople where the Red Crescent Society is working hard to meet their needs, and to furnish aid to the front. A large hospital has been established by this Society in connexion with the Stafford House Committee in the palace of the Sultan at Beylerbey. A large soup-kitchen, established by Mr. Barrington Kennett for the wounded who have travelled long distances, has proved of great benefit.

The following telegram was received from Dr. Crookshank by Colonel Loyd Lindsay on the 25th inst.—"Varna, 25th Sept.: Fighting all day; Turks attacked Russian position. Pitched hospital marquees on a large vacant space in a village near the mountain; cleared out mosque; two large houses; large barn filled with straw. Mead arrived same afternoon. During night we received 527 wounded. Working incessantly two nights and days, we transferred 300; remainder are under treatment; 21 amputations, and more yet. Patients supplied night and morning with a large plate of hot boiled mutton.—25th: Arrived at Varna; ten days ill with enteric fever."

Lord Blantyre has favoured us with the following letters from Dr. Busby and Dr. Featherstonhaugh:—

Alex. Ralph Busby to Lord Blantyre.

"Camp, near Kazerola, Sept. 8th, 1877.

"You would have heard from me before; but I have been much occupied during the last fortnight, and when I have had an opportunity, have been without writing materials. I am happy to say our tent has now come up, and we are having a quiet day. We thought it best to attach ourselves to some division of the army and move with it; so Lake and myself joined that of Nedjid Pasha at Rasgrad. The National Aid Society have lent us a tent. We were there some days when we were joined by Messrs. Wattie and Boyd. From Rasgrad we moved to Spazelen, where there was some skirmishing daily, but not sufficient to overburden us with wounded. We were pleased to find that the sick came to visit us in considerable numbers. We moved out with Nedjib from Spazelen on the 30th August, the result of the day being the occupation of the Russian position at Karahassan; no doubt you will have seen it fully described in the papers. We had on that day 250 wounded, and many more on the following morning. We have an ambulance of some twenty country waggons, which was useful in the transport to Rasgrad. After three days at Karahassan, we advanced further, and again the following day, with continued fighting, until the 6th, when it was very severe. The Russians were driven some ten miles, and to the opposite side of the Lom river. They lost heavily. I am pleased to say we were in it from the early morning, and I think did good service. We were dressing and attending to cases until it became too dark to see, and so slept as well as we could in the barley, with the wounded all round us. They suffered terribly, as the night was wet, cold, and miserable; indeed, horrible. At daylight there still remained many more to attend to, as the weather was very bad for them. Having finished there we rode to the rear, and found some 200 in a village that had received no treatment, and other cases continually coming in. We established ourselves there, and yesterday Mr. Pratt arrived with two surgeons. They are there now, and we arrived in this camp last night to be ready for an expected attack (Turkish) this morning. The Russian position at the end of the day was a very strong one, and it seems almost incredible they should have retired from it, but it seems so. They seem to be demoralised, and the Turks naturally in capital spirits and health; we hope to advance further towards Biela to-day or to-morrow.

"We have got now into good working order, though there was at first great inconvenience in the delay of the stores coming from England and the valuable collection of instruments getting into the hands of Dr. Oanes Bey, at Rustchuk. It seems to me it would have been better if each surgeon should have been provided with an instrument-case such as it is supplied to an army surgeon on his leaving England, and also that with each party should have come an ordinary medicine-chest or pannier of regulation pattern. By this means much expense would have been saved, and the purchase of drugs in Constantinople rendered unnecessary, besides more convenient for a sudden move. Mr. Pratt has given us all assistance in his power, and of course makes no distinction between ourselves and the surgeons of Stafford House. We are all in good health, and working amicably together.

"I trust you will excuse this hurried letter, but a good deal has to be done in getting ready for the next fight, which may happen any moment. We are expecting Mr. Pratt here to-day."

Mr. Featherstonhaugh to Lord Blantyre.

"30 miles due East of Erzeroum, August 28th, 1877.

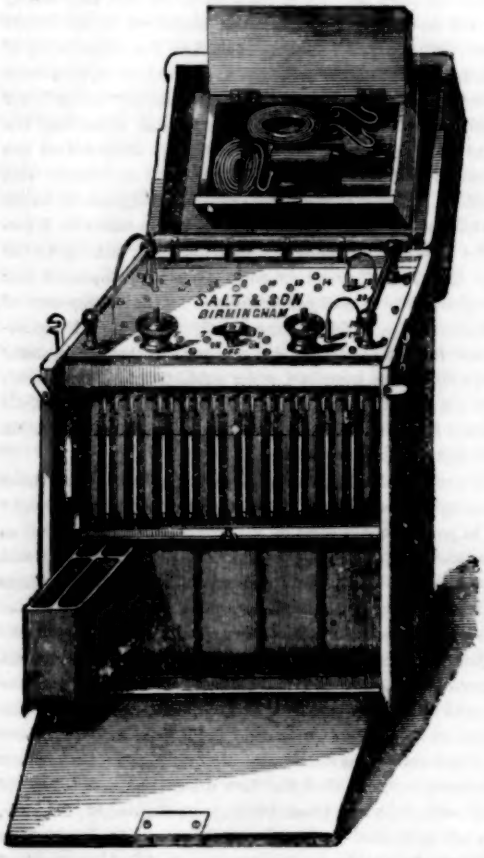
"You see by the above address I have left Erzeroum for a few days. On Sunday morning, just as I had finished dressing all my cases in our hospital, I got a note from Mr. Zohrab asking me to come here at once as *The Times* correspondent was very ill. I immediately came, leaving Dr. Guppy to see after our cases at Erzeroum, none of which are very serious, as no new wounded men have come in for some time. I found him suffering from a heavy cold and an attack of sunstroke. I fortunately brought out some few necessary things, and am happy to say this evening he feels better. I hope in a few days to return to the Turkish wounded. There is news of a severe battle at Mouktar's camp last Friday. I trust Drs. Casson and Buckby are in time to render some aid. No fresh wounded have come from the front for more than three weeks, and at present we have not more than 100 men in hospital. My last operation case was doing very well when I left on Sunday. The fighting seems pretty heavy over the other side. I see by *The Times* of the 10th that the Stafford House Committee are getting hospitals in working order. As you always said, *men* who can do something in the line of surgery are wanted; thanks to your exertions, a good many have been sent who can do more good than thousands of pounds worth

of stores, though, of course, the latter are also needed. I have not time to write more to-night, but hope to next week."

New Inventions.

SALT & SON'S NEW MEDICAL BATTERY.

THIS battery (of which we give an illustration) is the outcome of a series of experiments made by Messrs. Salt and Son, of Birmingham, to reduce to a minimum the risk of spilling the fluid contents of the cells whilst transporting the instrument to a patient's residence, and also to prevent the fumes from the acid injuring the plates by depositing a "film" upon them when in disuse.



The cells in this instance twenty in number, and arranged in sets of four, are suspended on springs pressing upwards, but capable of being depressed *en bloc*, by means of a hollow rod resting on the tops of the five stems used for drawing them up into contact with the plates.

The entire front of the case falls forward, and a wooden shelf, padded underneath with vulcanised rubber, is made to slide between the tops of the cells and the bottom of the plates, at such a position that without touching the plates, the cells are pressed tightly against it by the springs before mentioned, so that escape of the fluid is rendered impossible. The cells themselves may be readily drawn out and removed for the purpose of emptying and recharging them. Another advantage, as will be seen by the illustration, consists in the fact that the whole of the mechanism is at once exposed, and is thus rendered amenable to the ready removal of any of the parts for repair, amalgamation of plates, &c. All the parts are made so that any one can be easily removed by means of a screw sent out with each battery. A measure in vulcanite accompanies each instrument, containing the exact quantity of fluid required for each cell when the plates are engaged.

SURGICAL WADDING.

MESSRS. A. F. HENRY & SON (64, Bartholomew-close) have sent us some surgical wadding, which, by being coated on the outside with waterproof varnish, forms a clean and elegant substitute for lint and oil-silk for water dressing. This prepared wadding may also be very advantageously used, instead of the ordinary kind, for wrapping up rheumatic and inflamed joints, and for protecting tender surfaces, especially in cases where warmth and moisture are desirable.

ANTISEPTIC INHALATION IN PHTHISIS.

To the Editor of THE LANCET.

SIR,—Antiseptic inhalations in phthisis have been brought under the notice of the profession by several writers of repute, but I do not think that they have as yet received the attention which they merit. I have tried these inhalations in several cases of phthisis and bronchitis, and am very favourably impressed with their utility, although I do not for one moment bring them forward as specifics for either disease. In one case of phthisis of eighteen months' standing, occurring in a young woman aged twenty-eight years, in which the cough was decidedly troublesome and the sputum pretty copious, the antiseptic inhalation was used in the following way:—Two drachms of carbolic acid were added to six drachms of glycerine, and used by means of Dr. Siegle's steam-spray inhaler. The inhalations were used twice daily, night and morning, and continued for about ten minutes on each occasion. The night inhalation was used just before retiring to bed, and almost invariably procured the patient a good night's rest, free from coughing. After the inhalations had been used for three weeks, the cough and sputum both ceased—a circumstance unknown to the patient since the commencement of her disease, now over a year and a half.

In several other cases of both phthisis and bronchitis, in which the antiseptic inhalations were used, I have found them of service, in all cases causing more or less diminution of both sputum and cough. I have found them also to relieve more or less that irritability of the larynx and glottis which is such a distressing symptom in phthisis. The drug which I generally recommend for inhalation is carbolic acid in combination with glycerine, although other substances may be used—viz., spirit of chloroform, or compound tincture of benzoin, or succus conii. Spirit of turpentine has been recommended; but I have generally found it too irritating to the patient, causing much coughing and uneasiness during the process of inhaling. Several kinds of inhalers have been devised, but I do not know any one better than Siegle's, as by it the medicated fluid to be inhaled is heated to a comfortable temperature, and the spray finely pulverised.

Dr. Burney Yeo, in his recent little work on the Treatment of Phthisis, says: "I cannot myself doubt the value of antiseptic inhalations, even if they have only the effect of temporarily cleansing, as it were, the pulmonary surface. It is a process somewhat analogous to that of washing away the decomposing discharges of a foul superficial ulcer." Dr. Copeland also mentions the case of a young man who became cured of phthisis after working for a considerable time in a creasote manufactory. The testimony of Lemaire, Sansom, and of others, is very favourable to the use of antiseptic inhalations. I believe that the use of carbolised spray will be found a useful adjunct in the treatment of lung diseases generally, and that it is worthy of the attention of all those interested in the treatment of chest diseases.

Yours obediently,

Newry, Sept. 4th, 1877. J. G. THORNLEY, M.D., F.G.S.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 29, 1877.

THE medical aspects of "the Penge mystery" are, if possible, more momentous than the legal. However just the conclusion at which the judicial inquiry has arrived may appear—when viewed from a politico-social standpoint,—it is impossible not to feel that the case is, professionally speaking, eminently unsatisfactory in nearly all the leading features of its strange history. Here is a woman brought from a distance and placed under the care of a practitioner with no sufficient account of her previous condition or malady. Within a very few hours of her removal she dies, a certificate is given and withdrawn, the body is examined at an usual period after death, and taking the most favourable view of the proceedings, the post-mortem inquiry is not recorded—perhaps not conducted—with the precision essential to supply materials for a scientific judgment. This is the more to be regretted because the absence of a trustworthy report of the symptoms exhibited by the deceased woman during life rendered it imperatively necessary that every ray of light which the post-mortem appearances could shed on the case should be collected and focussed with the utmost patience and address. As it is, we must frankly confess our inability to draw any coherent set of inferences as to the cause of death from the pathological conditions described. There was emaciation, but whether it arose wholly or in part, directly or indirectly, from disease, there is not sufficient evidence to determine. The negative facts needful to exclude obvious source of error are not on the record. It is vain to speculate as to the relation of *cause* and *effect*, seeing that not only the connexions, but the very nature and characteristics, of the phenomena mentioned are themselves subjects of conjecture. We are, in truth, in the position so boldly and judiciously taken by one of the medical witnesses—Dr. GREENFIELD,—whose testimony was no doubt properly withdrawn: any opinion we might be induced to form must be based on the hypothesis that both fundamental terms of the syllogism are correct. With this large qualification it is obviously not worth while to proceed with the reasoning.

Meanwhile, let us, with a view to certain very necessary reflections on this painful case, note one or two of the salient defects in the sub- or super-structure of the medical argument. The Attorney-General essayed to supply the deficiencies, and even to adjust the discrepancies, of the medical evidence. He was of opinion that when doctors differ, and cannot settle their disputes, intelligent laymen must undertake the task for themselves. The attempt was not wholly successful. The theory that brain-softening is caused by "discharge of serum on the brain"—a process by which the brain becomes sodden, we presume—will not more readily be accepted by pathologists than the explanation that redness of "the interior coating of the stomach" is "all that is meant by inflammation of the peritoneum," is likely to find favour with anatomists. Nevertheless, the leader of the bar struck the key-note of a great inquiry when, in his closing speech, he recalled attention to the "dilation of one eye, and the contraction of the other." Unhappily the indication afforded by the difference of the two pupils does not seem to have been accurately appreciated. Such a phenomenon is known to be one of the marked symptoms of general paralysis, a disease which progressively disorganises and wastes mind and body. It would have been more than interesting to ascertain whether this difference existed at an early period of the case. Careful examination of a photograph, highly magnified, might have helped to settle the question. Another circumstance which should have suggested this line of research is the fact that nearly all the errors made by HARRIET STAUNTON in her letters were of the class commonly presented in the orthography of general paralytics, the substitution of words of approximate sound or aspect, "peace" for "piece," "colour" for "collar," or the transposition of letters, as in writing the word "selves," instead of "sleeves." It is alleged that the deceased was subject to paroxysms of excitement and violence. This, too, is characteristic of the disease to which we allude. It is, as already observed, impossible to determine anything, and idle to speculate; but, looking to the fact that Mrs. BUTTERFIELD once strongly believed her daughter to be mentally incapacitated for the management of her own affairs, and to the apparently unquestioned circumstance that the deceased did not take advantage of many opportunities to complain when subjected to ill-treatment, but, on the contrary, seems to have been in terror of all around her, this line of inquiry certainly claimed attention which it did not receive.

No one of the hypotheses formed appears to have been thoroughly worked out. If the cause of death was thought to be poison, surely some of the excretory organs, as well as the intestines, should have been submitted to analysis, and it would have been natural to inquire for the excreta. Cases in which poison has been discovered in unexpected localities are sufficiently numerous to suggest an exhaustive search. Again, the theory of death in, or by, convulsions was not more closely pursued. We know nothing of the state of the tongue as regards position and marks, and, although the arms are said to have been rigid at the time of death, there does not seem to have been any attempt to ascertain whether the teeth were clenched, the face drawn, or other tokens of the mode of decease present to suggest the cause. Frankly, we are compelled—most reluctantly—to protest that every attempt to penetrate the mystery is foiled by want of evidence of medical *facts*. The difficulties that beset the inquiry are not those of scientific inference, but arise from the lack of grounds to argue upon. There is, of course, nothing embarrassing in the circumstance that the muscles of the upper extremities were rigidly contracted. That is common enough in all forms of death with irritation of the great nerve centres. A deprivation of oxygen—or relative preponderance of carbonic acid in the blood—which happens in many forms of death, will produce that phenomenon, but we need to know something of the associated symptoms or appearances. Again, it is startling to be told that the brain was "firm" six days after death, and at the same time "congested,"

while there is no description, and, as far as we are aware, no means taken to demonstrate the existence, of such a state of disease as would account for the remarkable conditions alleged to have been observed. Looking to the post-mortem appearances alone, the case might have been one of slow poisoning by arsenic, though it is impossible to imagine the poison would not in that event have been detected. In short, a crowd of hypotheses rise unbidden from that inscrutable corpse, and not one can be laid because none have been brought to the test of a practical and exhaustive scrutiny.

The lessons of the mystery—and such it must, we fear, remain—are three, and it will be wise to profit by them: Cases which have not been *observed* during life should not be certified after death. Every post-mortem examination undertaken to clear up a mystery ought to be conducted and recorded in strict conformity with the most complete methods of scientific investigation, and no preconceived or striking theory of a case ought to tempt the operator to omit a single step in the research to exhaust every possibility. Such researches should be prosecuted, personally by experts in pathology, with the aid of all approved appliances. If these simple rules are deduced for future guidance, there will not be so much mystery in cases of this deplorable class; the safeguards of human life will be more trusty; and the medical aspects of an unexplained death, when it occurs, will be less unsatisfactory to the profession, and particularly those of its members who are directly concerned. None of these questions affect the absolute justice of the verdict returned. The evidence of criminal neglect was overwhelming. The doubtful issues relate to the conditions under which a crime of singular atrocity was committed, and the indirect processes employed.

ONE of the most interesting subjects in physiology, and one upon which much experimental investigation has been made with very conflicting results, is that which deals with the relations between body heat and the nervous system. That there is an intimate relation between the two cannot be doubted, for since thermometry has come into general use as a clinical aid, there have been numerous instances recorded in which no other cause but a lesion of the nervous centres could be assigned for unusual and surprising variations in the temperature of the body. Of course explanations of the relation between the lesion and the apparent effect have not been wanting, and hypotheses have been put to the test of experiment. Experimentation, however, has not simply endeavoured to explain these hypotheses; it has added others more or less tenable, until the subject has become one of the most disputed questions in science. The reason of the contradictions and various assertions that have been made on this subject is to be found doubtless in the complexity of the subject, and the want of knowledge upon all modifying conditions. This, however, may be conceded, that of all regions of the nervous system, the spinal cord has seemed to play the chiefest part in anomalous variations of body heat. This has been attributed to its close connexion with the great system of vaso-motor nerves, and views founded upon this connexion, more or less elaborate, have been propounded to explain the thermic effects of spinal lesions.

A recent contribution to the literature of the subject has been made by M. PARINAUD, of Paris, and is to be found in the *Archives de Physiologie*. The conclusions he has arrived at, after numerous careful experiments, have not been in accordance with previous writers; nor, indeed, did they bear out the anticipations he had formed of them. He tells us that he was led to the inquiry by observing, in a case of fatal epileptiform convulsions, that the rise in temperature, which occurred *pari passu* with the fits, did not cease with the cessation of the fits, but continued to mount till death, which occurred six hours later, when it reached 108° F., and soon after death 110°. It was then evident that the great rise in temperature could not be attributed solely to the muscular contractions; and M. PARINAUD thought a more feasible explanation of it could be found in assuming a general relaxation of the vaso-motor nerves after their prolonged excitation. It was to determine this that he entered upon an experimental inquiry.

The experiments in question were made on rabbits, and consisted in observing the changes in temperature at various parts of the surface of the body and in the rectum, consequent upon sections of the spinal cord in the dorsal region. At the same time the temperature of the surrounding air was noted, so that due allowance could be made for any loss of heat by radiation. Simultaneous observations were taken of the temperature of the rectum, that of the inguinal and axillary regions respectively, and of the surface of the anterior and posterior extremities. The main result of the research was that the rectal temperature fell constantly from the time of section until death, that the deep temperature of both the paralysed and non-paralysed parts (e.g., the axilla and groin) also proportionately fell, but that in the paralysed limb it was lower than in the non-paralysed. On the other hand, the cutaneous peripheral temperature was higher in the paralysed foot than in the fore-foot, and remained so for some time after the section. It was found, however, that this rise of the cutaneous temperature was more marked when the atmospheric temperature was low, and it was further noticed to be distinctly transitory in its duration, for if the animal survived long enough the paralysed foot became colder than the non-palsied. The fall in the rectal temperature was not influenced by the temperature of the environment, unless a great difference existed between the latter and that of the animal; and, the loss in the hind limbs being attributed to diminished production of caloric, the rectal lowering was held to be due to the diminished amount of nutritive activity required for these regions. To sum up these results in other words: transverse sections of the spinal cord in the cervical or dorsal region led to a fall in the central temperature of the body, even when the surrounding air attained a heat of 28° C. (82·4° F.) or 30° C. (86° F.) This lowering of the central temperature appeared to be due to the cooling of the paralysed parts, the deep temperature of which remained during the whole experiment at a lower level than in the regions still under the influence of the spinal cord. But in the paralysed parts there was a rise in the surface temperature of the extremities, a rise probably owing to a transient vaso-motor paralysis, for it passed away

in time, and depended for its degree upon the initial temperature of the skin and the surrounding atmosphere. The lowered central temperature depended on the diminished production of caloric and on greater radiation.

Naunyn and Quincke, whose names are well known in connexion with this subject, attributed the whole of the loss of central temperature to the increased loss of caloric by radiation from the larger surface of blood exposed by the paralysis of vaso-motor nerves, and they held that section of the spinal cord actually increased the production of animal heat, an increase which was more than counterbalanced by the greater loss by cutaneous radiation. The "warm chamber" experiments, upon which these authors base their conclusions, and in which they obtained a rise in the central temperature of the body of rabbits after destruction of the spinal cord in the cervical region, are, according to M. Parinaud, not to be relied on, as sufficient care was not taken to prevent the saturation of the air with the exhalations from the animal; and Delaroche and Berger have shown how warm-blooded animals vary in their power of resistance to dry or moist heat.

The diminution of the temperature in the paralysed parts does not appear to be due to paralysis of the sympathetic, and the rise of cutaneous temperature, which, according to Naunyn and Quincke, is the immediate cause of the systemic cooling, is not invariable. It is also transitory, disappearing on the second day, and if the animal survive, the reverse effect is seen to that produced in the first twenty-four hours, the skin of the paralysed part becoming colder than that of the non-paralysed. The theory of Naunyn and Quincke is then not admissible, but in certain conditions an animal with a divided spinal cord is more easily warmed than is a healthy animal. Not that it produces more caloric, but the mere division of the cord leads to a diminution in the processes of tissue-oxidation and to the suppression or at least the notable restriction of the power possessed by all warm-blooded animals, of regulating their temperature in spite of external variations. There is no doubt that evaporation, radiation, contact, &c., affect the animal heat, but these influences are to a certain extent controlled by the vaso-motor system, which governs the contraction of the bloodvessels. By cutting the cord, this resistance to the environment is destroyed, and the condition of the animal is reduced to that of a cold- instead of a warm-blooded creature. Thus it happens that if between the temperature of the animal and that of the surrounding medium there exists so great a difference that the former yields more caloric than it receives, the animal becomes cooler. Then, if the external temperature be raised, a point will be reached when the animal no longer yields more than it receives, and its temperature will be stationary; and further, if the ambient temperature be raised still more, the animal will receive more heat than it loses, and will be actually warmed.

Lastly, as to the precise manner in which the spinal cord operates, it must be feared that physiology is still much in the dark. Tscheschichin, in his experiments of puncture of the medulla followed by rise in temperature, supposed that the spinal cord exerted a moderating influence upon thermal changes, which was withdrawn when the cord was injured or divided. But M. Parinaud thinks the increased heat-production better explained by irritation of the grey matter in these experiments, and the records of extraordinary high temperatures following spinal injuries are held to favour this view; for in all such cases some time elapsed before the rise in temperature took place after the receipt of the injury, thus allowing of the supervention of inflammatory and irritative processes. He urges that the reason why experimental inquiry does not reproduce these phenomena is probably because animals are less prone to traumatic myelitis than human subjects, just as they enjoy immunity from severe peritonitis. Moreover there are cases of spinal traumatism in man which have been marked by remarkably low temperatures — the true effect of the spinal lesion without inflammatory changes. In concluding, M. Parinaud states his belief that the spinal cord influences animal heat by means of nerves distinct from the vaso-motor system, and, indeed, which may be imagined to have an action quite contrary to that set of nerves. At the same time he does not think it necessary to invent a distinct system of "calorific" nerves, but believes those nerves to be sufficient which regulate the processes of nutrition and secretion, of which calorification is simply the physico-chemical result. This view does not entail the belief in any specially localised thermic centre in the cerebro-spinal axis, but it is not opposed to the existence of moderator centres of calorification, either, as Tscheschichin says, by restraining the activity of the spinal cord, or acting by means of nerves ruling the expenditure of caloric. The presumed existence of such thermic centres has certainly the advantage of simplifying an intricate, and as yet incompletely studied, subject.

Since we last referred to the Naval Medical Service in The Lancet of the 1st inst., two or three lengthy communications have reached us, descanting diffusely, though with some ability, on the many grievances, real or imaginary, to which the members of the service are subjected. The Warrant of 1875, from which so much was anticipated, has not apparently worked well, and it is said that many of its minor provisions are ingeniously evaded by the executive. Be this as it may, we are told that the system of combining age with service in calculating the rate of retiring allowances is unjust, and acts unequally. We still fail to see the injustice of the system as applied to medical officers. Half-pay is, if we are rightly informed, an evil to which all officers in the service are subjected alike, and under the present system of navy administration it is, we believe, inevitable. But it is well known, and cannot be denied, that many officers, combatant and non-combatant, are on various occasions in their career on half-pay, not compulsorily, but because they do not for the moment care for active service. The reason may be in one case an unpopular commander; in another, climate (e.g., the West Coast); in another, domestic ties. Naval medical officers, if they think about the matter, must be able to recall instances among their compeers of men who, scorning every objection of this sort, have always been on active service, whenever and wherever it was possible, and have of course, as a natural consequence, suffered very little from the compulsory half-pay system. We think therefore that before

it is concluded that the half-pay grievance is really unjust, it must be shown that the system presses more hardly on the medical than on the combatant officers, and that surgeons do not pick and choose their work or their stations—i.e., do not remain on half-pay voluntarily.

The block that exists in promotion to the upper ranks is undoubtedly a real and a very serious evil. It appears that there are but seventeen superior appointments in all, including the post of Medical Director-General, and, according to information received, there are at the present time no less than eighty fleet-surgeons waiting for promotion. This state of things is not only a glaring evil as regards these officers, but it recoils in its turn upon the staff-surgeons, the best kind of whose work the fleet-surgeons are often called upon to discharge. In point of fact, the condition of matters would be analogous if a commander were called upon to do duty as a lieutenant. We agree with a correspondent quoted by the *Civil Service Gazette*, that this block could and probably would be successfully remedied, (1) if inspectors-general held their appointments for three years only, had the option of retiring on full-pay (£2 per day), and were compulsorily retired at sixty years of age, without further increase; (2) if deputy inspectors-general had five years' service—equally divided between home and foreign,—and were compulsorily retired at the age of sixty on £1 3*s.* a day, having likewise option of retirement before this age is reached, if the five years' service be completed; (3) if fleet-surgeons were compulsorily retired at fifty-five (instead of at sixty) years of age, on £450 per annum, and staff-surgeons compulsorily retired at the age of fifty on £300 a year, with option of retirement at forty-five on £280 annually. It is also suggested by the same writer that deputy inspectors-general should be chosen from fleet-surgeons between forty-five and fifty years old, preference being given to those who have displayed professional and administrative fitness, and that dockyard, Naval Reserve, marine infirmary, and other shore appointments, should be reserved for those fleet-surgeons whose age precludes promotion to the higher ranks. These suggestions are reasonable enough, and well worthy of serious consideration by the authorities at Whitehall.

Apart from questions of finance and promotion there are, however, some minor grievances, about which little is said or written, but as to which a good deal is felt in the service. The "cabin" question is still a sore point. Quarters are supposed to be allotted (by a standing order) in accordance with relative rank; but it appears that under any circumstances the navigating officer, chaplain, and paymaster invariably have choice of cabins before the medical officer, whatever the rank of the latter may be. We are also informed that the custom of "piping to the side" when an officer comes on board is still invariably, and as it would appear studiously, omitted in the case of medical officers; so that "Jack" and the sentry on duty for the time being look over the gangway, and say, "Oh! it's only the doctor."

These and other omissions in the manners and customs on board commissioned ships may seem to outsiders trivial and hardly worth notice; but, as will be readily admitted by those familiar with the traditions of the service and accustomed to a life afloat, they go for a great deal, and very much influence the comfort as well as status of members of a community who are governed by, and live in an atmosphere of, stringent rules that map out etiquette as well as enforce obedience with very great nicety.

We must anticipate hopefully that the new First Lord will bring to bear his very excellent administrative capacity on this vexed question. There are already vacancies for no less than fifty-one surgeons in our navy, and before the close of the year that number will, of course, have increased. It is just now specially important that our ships should be supplied with efficient men of all ranks, and no pains should be spared to make the Naval Medical Service more attractive than it appears to be at the present time.

IT is not given to everyone who may have initiated a great public work to review many years afterwards the results of that work. This lot has happily fallen to Mr. EDWIN CHADWICK, and the story which he unfolded on the 25th inst. at Aberdeen of the great work which he inaugurated thirty-five years ago is one that should receive the thoughtful attention of all who are interested in public health administration. Mr. CHADWICK's report on the sanitary condition of the labouring population of Great Britain, published in 1842, was, indeed, the starting-point of public effort in sanitary work in this country. With our sharpened conceptions as to public health needs, we are too apt to underrate, or imperfectly apprehend, what has been gained within the comparatively brief period that has elapsed since that time. Mr. CHADWICK's address will admirably serve to remove any error of conception or misapprehension of this sort by showing how within a number of years, hardly exceeding half an ordinary lifetime, we have in our public sanitary work emerged from a stage of ignorance and apathy, passed into a stage of empiricism and half-knowledge, "in which stage it is very much at present," and are on the threshold of a stage of science, of full knowledge. "Corresponding with these stages of work," he observed, "are stages of empirical and hasty legislation, of defective administrative organisation, which require distinct exposition as a cause of disaster and waste of money without equivalent results; and next we must look to more advanced scientific and efficient legislation—the outcome due from the study of the means of the health of the people, which the Premier has repeatedly declared to be the first duty of a statesman." Mr. CHADWICK confined himself in his address to an exposition of the established standards ("normas" as he phrased them) of sanitary power which are available for an advanced legislation and administration to supply.

As a simple history of what had been gained by sanitary work since 1842, Mr. CHADWICK's address would have been of peculiar value at the present time. It would have helped to a better apprehension of our progress, would have been a lesson to sanitary tetchiness, and would have conduced to patience. But, as a masterly indication of the present position and need of our public sanitary work, it can hardly fail to exercise a profound influence in promoting the advance of such work. It was from a failure, especially on the part of the Local Government Board, to recognise the fact that the time had come for substituting scientific for empirical—half-knowledge—conceptions in sanitary work, that the frustra-

tion of recent legislation on public health has come about. There is a cruel irony in the fact that Mr. CHADWICK's successors in official life should have been mainly responsible for this miscarriage. But the sanitary history of the past thirty-five years shows that even the empiricism of a central authority, however vexatious it may be, may be regarded with some equanimity, as it cannot reasonably be presumed to be more opaque than that of many of the administrative media into and through which light has of late years penetrated.

Annotations.

"Ne quid nimis."

"PASS" AND "PLUCK."

IN our last week's issue we published the percentages of the candidates who had passed and who had been referred at the primary and pass examinations of the Royal College of Surgeons. These lists have now been published for three or four years, and have undoubtedly done some good service by stirring up competition and infusing fresh vigour into the teaching of many of our medical schools. But as they have been occasionally resorted to in order to show the superiority of the instruction at some schools over that of others, it is necessary to point out that all such inferences must be received with due caution and as furnishing fresh proofs of the fallacies to which all statistics are liable. It is well known that at some schools every precaution is taken to prevent not only those candidates who are almost certain to be rejected from presenting themselves for examination, but others whose prospects may be termed doubtful. A good average is thus secured, but at the expense of students, some of whom would pass; for no teacher can more than approximately guess the result in many of these cases. If the test examinations in vogue at most schools be made too severe, the teachers, instead of the examiners, become the arbiters of a man's right to enter the profession; and this is manifestly unjust to the candidate who may have fairly worked, but whose deficiencies are much more present in a teacher's mind than in that of an independent examiner. At other schools no check is enforced on the student, and everyone who has honestly fulfilled the requirements of the curriculum is allowed to offer himself. In such cases, although the average is not so good, a much fairer estimate of the teaching at the school is obtained. The number of the actual candidates from the different schools must be compared with the number that should be ready for examination, so that this source of fallacy may be eliminated. In some schools, moreover, the teaching is almost limited to the requirements of these examinations, to the manifest disadvantage of the better students; and we should be glad if the statistics of the higher examinations, such as those for the Fellowship and for the various M.B. examinations, were published, so that we might get some idea of what is being done in the way of advanced instruction in our schools. Probably an inspection would give a much better insight into the excellencies and deficiencies of medical teaching than can be inferred from any publication of statistics. We would warn students and teachers against a bad practice which, we fear, is greatly on the increase since these tables have been published, and that is the attempt to cram up the necessary amount of knowledge in a very short time with the aid of a tutor who makes these examinations his specialty in the school, to the neglect of all the practical knowledge, which can only be attained by assiduous application to honest dissecting and fair clinical work.

PROVIDENT DISPENSARIES.

A SHORT and practical paper was read on this subject in the Public Health Section of the British Medical Association in Manchester, last month, by D. Henry Monckton, M.D., F.R.C.S. Dr. Monckton is senior surgeon to the Rugeley District Hospital and Provident Dispensary, and for many years has been one of the most persevering and consistent advocates of the Provident principle. We have read his paper with considerable interest. He endorses the recommendations of the Charity Organisation Society. He reckons that 66 per cent. of the members of a provident dispensary claim attendance. He reports the present state of the Manchester experiment to consist in the establishment of seven dispensaries, with nearly 14,000 members, subscribing £2881, and paying to the medical attendants some £1500 a year. He describes provident dispensaries in large towns as originating in the discovered abuses of medical charity, and, in small towns and villages, in the observation by clergymen and others of families unattended in illness, because of the presence in the cupboard of an unpaid bill, or a natural dread of one to come at Christmas. Not the least important, and, withal sensible, part of Dr. Monckton's paper is that in which he recognises and states the fact of the divided feeling in the profession as to the merits of provident dispensaries as remedies for the abuses and evils admitted. In Birmingham, lately, as our readers know, a very able paper was read by Mr. Sampson Gamgee, in support of provident dispensaries. A month after its reading, a special meeting of the Birmingham and Midland Counties Branch of the British Medical Association was held to discuss the question—Are Provident Dispensaries desirable or not? And, according to Dr. Monckton, "a very strong and somewhat warm feeling was manifested adverse to them." Serious charges were brought against them and their promoters: "that they were close boroughs, that they robbed beginners of their chances of success, that they admitted those well able to pay fees, and so robbed older and established practitioners of their patients." Dr. Monckton replied that the best things were liable to abuse, and precautions must be taken against their being abused. He liberally and, we think, wisely recommended that every registered medical man, resident within the district and willing to act, should be placed on the medical staff; and advised that, in small towns and rural districts, no public officer or resident dispenser should be employed, so as to save expenditure and increase the sum to be distributed among medical men. It is the smallness of this in proportion to the work done that is discouraging. In the Manchester experiment, for example, we have only £1500 paid to the medical officers for attendance on 14,000 members. The sum represents about 2*s.* 1½*d.* a member per year—in other words, less than any average adult member would spend in a week upon beer; and probably less than he would spend on medicine in a year, if provident dispensaries did not exist at all. We are far from having got at all the facts of this deeply interesting medical and social question. It is an easy assumption that people getting relief at a medical charity are merely pauperised by it. But they easily do this, and yet pay more than 2*s.* 1½*d.* a year to a medical man of their own choice for occasional service. It must be remembered that this sum entitles a member to every kind of medical service and medicine which he fancies he requires. In Rugeley the pecuniary result to the profession is better. Every five members pay a guinea to the dispensary, well or

ill. We are not told how much of this goes to the dispensary, and how much to the men who do the work. We are most anxious to see the provident principle adopted extensively by fit classes; but it must be protected from abuse, and the dignity of medicine must be preserved.

MEDICINE AMONG THE ANCIENT EGYPTIANS.

THE *Examiner* for Sept. 22nd states that the edition of the famous papyrus which Mr. George Ebers brought to light three or four years ago, and which he entitled "The Hermetic Book of Medicaments of the Ancient Egyptians in Hieratic Letters," is the theme at present of general discussion in Germany. The papyrus is in the library of the University of Leipzig, where, for the sake of better exhibition, it has been cut into twenty-nine pieces, each of which lies in a glass-case. From palæographic and historical evidence, Mr. Ebers reckons that the document dates from the middle of the sixteenth century before the Christian era, and it is thought to contain one of the six books on medicine mentioned by Clemens of Alexandria—namely, that referred to under the title "Περὶ Φαρμακῶν." The name of Hermetic books is derived from the Greek Hermes, which is the Hellenic name for the Egyptian god Thyoth, or Thoth, who is said to have revealed to mankind this sort of scientific knowledge. Of forty-two Hermetic books, thirty-six contained the whole Egyptian philosophy. Six of them treated on the structure of the body, on illnesses, on surgical instruments, on medicaments, on the eyes, and on female complaints. It is probable that the Ebers papyrus is the oldest medical work left us, older than a corresponding text of Rig Veda. It is worthy of note that Egypt had State-paid doctors, who exercised their profession in accordance with written medical treatises long before the art of healing attained any scientific development among the Greeks; and it is from Egypt, as can now be proved, that the Greeks mainly drew their medical knowledge. Herodotus had expressed this opinion, but his statements have always been doubted. The emancipation of medicine from theology must, therefore, have taken place earlier in Egypt than in Greece. It is a curious fact that even in the days of Herodotus specialists existed, some for the eyes, others for the head, others for the teeth, others for the stomach and internal disorders (Bk. ii. 84). Homer, too, speaks of the Egyptian art of healing, calling each Egyptian a medical man. The anatomical knowledge of the Egyptians was probably greater than has hitherto been assumed, but during the later decay of their medical art the magical element seems to have crept in. The valuable papyrus is further interesting in a mythological sense, as it is stated to contain information respecting the Egyptian deities, who were said to be subject to illnesses, and to be in the habit of curing each other.

THE INDIAN FAMINE.

THERE is good reason to believe that the height of the Indian famine has been reached, and that we may now look for a sure, although it may be at first but slow, decline of the unutterable misery in the stricken districts. Rain has fallen plentifully over a large portion of the areas within which famine prevails, agricultural work is becoming active in the districts which have received the welcome downpour, and the prospect of the crops is hopeful. The surest indication that the extremest stress of the famine is at an end is that the people engaged on the relief are beginning to hurry away to their homes. The number in the relief-camps at Madras has already decreased 14,000 or 15,000; and although the decrease in the country camps is not proportionately so large, nevertheless it is marked and continuous. The tide of famine has, in fact, turned, and the ebb is now set in.

The latest reports give the following numbers of persons receiving relief in the famine-stricken districts:—Madras Presidency: gratuitous, 1,160,501; on works, 698,476 (previous numbers, 1,513,555 and 773,094). Bombay Presidency: gratuitous, 160,380; on works, 242,860 (previous numbers, 158,732 and 280,727). Mysore: gratuitous, 227,000; on works, 52,000.

The future famine policy in Madras determined upon in conference between the Viceroy and the Duke of Buckingham is thus summarily stated in a telegram from the Calcutta correspondent of *The Times*, under date of Sept. 23rd: "Uniform relief wages, food rates unsupervised, relief kitchens closed, petty local relief works stopped, and large numbers draughted to work on the railway embankment between Mysore and Bangalore. The strength of the people is so reduced that possibly the call for hard work may prove destructive; but the officials are enjoined that enfeebled persons are to have special consideration, and they will probably be further vested with large powers and ample discretion."

We learn from the *Madras Times* that the pressure upon the medical department in the Presidency is so great that the Surgeon-General has applied to the Government to sanction the employment temporarily during the present crisis of private medical practitioners in Southern India holding European diplomas. It would appear, however, according to the same journal, that there are but *three* medical men available for this special service.

The advent of the rains, whilst turning the tide of famine in Western and Southern India, would appear to have plunged other parts of the vast country into more or less misery. The rainfall has been so heavy in Burmah that destructive inundations have occurred, and the crops on the ground endangered. The drain upon the grain-stores of Burmah for Madras has been enormous, and the price of rice there has gone up with the demand upon the market. This, together with the interruption of labour arising from the excessive rains, has brought the poor in Rangoon at least to the verge of starvation. Adding to this gloomy prospect, cholera, it is reported, has appeared in Rangoon.

ILLNESS OR INTOXICATION.

WE long ago urged that at every police-station, one of the cells in which persons taken into custody are lodged should be set apart for hospital purposes, and that every case of unconsciousness or great depression should be placed in this apartment under the care of an orderly, and as quickly as possible visited by a medical practitioner. We suggested that the expense of this special provision—the "doctor's fee" and the cost of attendance—should be added to the fine imposed if the case proved to be one of intoxication, or be recoverable from the patient or his friends if it turned out to be illness. No hardship would be inflicted by this arrangement, and many untoward consequences might be averted. We are induced to revive and repeat this suggestion as preferable to that recently offered by a contemporary, to the effect that the College of Physicians should issue "a set of instructions for the guidance of police inspectors," with the view of enabling them "to distinguish between apparent intoxication and any of the grave symptoms which threaten the life of the supposed drunkard." No "instructions" could fairly supply the want of medical knowledge in the diagnosis of such cerebral disease as may be confounded with the effects of drink. The discrimination is not always easy to the experienced practitioner, and it would not only be vain but mischievous

to entrust the task of recognising the need of medical help to police inspectors, however intelligent. There is seldom any difficulty in determining whether an unconscious person has been nearly drowned, and the method of inducing artificial respiration may well be explained to casual bystanders. The case of disease simulating intoxication is widely different. We think it would be ill-judged to issue instructions for the treatment of such cases. There are, in fact, no general rules applicable to them; nothing to be done which may not sometimes prove injurious. The one aim, and the only safeguard, must be to secure immediate help for the sick. To this end the measure we have recommended is the most direct and facile. Let *every* case of unconsciousness, great confusion, or marked depression, be placed in the hospital cell, and notice sent to the district surgeon, or nearest practitioner. Add the fee to the fine if the case proves to be one of drunkenness, payment being made out of the borough rate or county fund if the fine be irrecoverable. In the event of a case being actually one of disease, the fee should, as we have said, be paid by the patient or the friends, or, if the sick person be a pauper, the parish. This is the most practical remedy, and as such we again urge its consideration.

EFFECTS OF THE INJECTION OF AIR INTO THE ARTERIES.

M. COURTY read a paper before the Medical Section of the French Association for the Advancement of Science, held at Havre on the 25th of August, in which he communicates the results of experiments made in M. Vulpian's laboratory to study the general and local troubles produced by the presence of free gas within the vessels. Operating on dogs both in the natural condition and under the influence of curara, he has, by opening a collateral branch, propelled air towards the carotid, crural, mesenteric, and splenic arteries, allowing the air immediately afterwards to circulate freely with and in the course of the blood. He has also measured the force requisite to propel this air through the peripheric extremity of one of these arteries, that had previously been tied, into the corresponding vein. In other experiments he caused the arterial tension to vary by acting on the vaso-motor nerves of the organ through which the bullæ of air were passing. M. Courty's experiments appear to have established the following points. Bullæ of air are capable of traversing the capillaries, though they impede the circulation. When from five to fifteen cubic centimetres of air are injected into an artery, afterwards left free, the whole will be found to have traversed the encephalon and passed from the carotid into the jugular in the course of from five to ten minutes. The same quantity of air passes through the lower limb of an animal in from five to twenty minutes. If a similar quantity of air be injected into the mesenteric or splenic arteries, however, it remains stationary, and is never propelled through either the spleen or intestines. It is obvious, therefore, that different organs differ considerably in the degree to which they are permeable to bullæ of air. When, instead of determining the rapidity with which the bullæ of air traversed different organs, M. Courty confined his attention to a single organ, the state of which was made to vary, he found that the circulation of the bullæ of air was facilitated when the arterial pressure was augmented; the bullæ traversed a limb more rapidly the sciatic nerve of which had been divided. The circulation of bubbles of air through the capillary network depends, therefore, first upon the organ itself; secondly, on the state of the vaso-motor nerves; and thirdly, upon the arterial tension. In studying the course of gases into the arterial system generally, M. Courty has established the fact that air injected by the peripheric extremity of an artery, if its volume be large and the pressure used considerable, may return, either wholly or in part, by arterial anastomoses, into the aorta, without traversing the corresponding capillaries. Small quantities thus injected into the aorta or into the vessels at large do not appear to produce any ill effects. In some cases the air produced sudden stoppage of the heart, in consequence of bullæ entering the coronary arteries, or more correctly, perhaps, owing to anæmia of the whole of the myelocephalon. When air is injected in large amount into the circulation, as in quantities of 200 to 300 cubic centimeters, death results from stoppage of the circulation, caused first by the passage into the veins and right heart of some of the arterial air and consecutive asystolia; secondly, by retardation of the circulation, caused directly by the presence of bullæ in the general capillaries; and thirdly, by paralysis of the myelencephalic vaso-motor nerves, and consequent fall of tension of the vascular system generally.

"ART IN HOSPITALS."

UNDER this or some similar title, the movement which originated in these columns in favour of embellishing the walls of hospital wards with attractive pictures has made considerable progress. What is wanted now is a little organisation in carrying out the intention. Print publishers and sellers have, we believe, lent most valuable aid in the adornment of particular institutions. It would be well if, perhaps through the intervention of a general committee, with the limited funds it is thought desirable to devote to this purpose, more varied and cheerful results could be obtained than fall within the compass of promiscuous generosity. Many contributors who are not prepared to subscribe largely to such an object would be willing to assist a well-devised effort. Without doubt, pleasing pictures are most agreeable objects for the eye of the convalescent patient to rest upon; and, excluding subjects of a character likely to awaken undesirable trains of thought, it is surely possible to select a sufficient number of cheerful and well-executed prints, plain and coloured, with which to give the wards of a hospital an attractive wall decoration. We cannot admit that the matter is of small moment. It is a detail of the class which helps to make the difference between interest and *ennui* at an epoch of life when not only is it especially kindly to cheer and divert the mind, but when every healthful diversion is tributary to the cure, and therefore really helpful.

THE FILTH OF FOREIGN HOTELS.

THE complaints of those who crowd to the Continent for health and relaxation become each year louder against the filth of foreign hotels. This may to some extent be due to the increasing importance, happily, attached to sanitary precautions amongst ourselves. It cannot, however, be disguised or doubted that the dirty habits of our neighbours across the Channel are execrable. How civilised communities can live under conditions so unutterably nasty as those which seem to content the permanent residents in most Continental towns and places of fashionable resort, is past comprehension. We have no wish to particularise where custom is almost universally at fault, but it is impossible not to feel that the disregard of ordinary decency in house arrangements so commonly witnessed is revolting to the most ordinary sensations. It is a serious question whether English physicians will be justified in longer deferring a united warning to their friends and patients against visiting localities distinguished by an utter absence of the commonest precautions against blood-poisoning and pestilence. It is difficult to observe the obvious rules of international politeness in dealing with this vital

subject. If English tourists deserted some of the most neglected towns and districts on the Continent, the local communities would be greatly the losers by this measure, but they may be assured this measure must be urged, and will before long be taken, unless some heed is given to the remonstrances repeatedly addressed to them. Clean drainage and proper appliances for the final disposal of sewage are essential in every populous district, more particularly one to which the sickly and debilitated have recourse in quest of fresh air and immunity from personal annoyances. The unappetising odours and poisonous emanations which beset the traveller from the first moment of landing on the Continent, and from which he scarcely escapes until he is again at home, are neither conducive to health nor free from the gravest perils. It is doubtless useless to argue with persons devoid of sanitary instincts, and wholly uninstructed, but they may be impressible through their pockets, and to the sense of profit it will shortly be necessary to appeal.

MIDDLE-CLASS HOSPITALS IN THE COLONIES.

IT appears that even in the matter of middle-class hospitals the colonies are somewhat in advance of us. *The Colonies* of the 22nd reports that at Kimberley, in Griqualand West, South Africa, there are four distinct class hospitals—the Upper-Class, the General, the Half-Caste, and the Kafir Hospital. At the Upper-Class Hospital a charge is made of 7*s.* 6*d.* a day, and at the General Hospital 4*s.* 6*d.*, from persons of independent means; and some small payment is required in the Half-Caste and Kafir Hospitals from masters of servants. The rest of the expenses is borne by the Colonial Government, but the upper-class establishment is nearly, if not quite, self-supporting. The scale is somewhat heavy, but not comparatively with the cost of living, house-rent, &c., in the district. Mr. G. P. Haydon, of Uckfield, who gives these particulars in *The Colonies*, says: "The hospital is built of sun-dried bricks, and cased with corrugated iron; the thickness of the walls rendering it cool in summer and warm in winter. The wards, as a rule, have only two beds each, and these can be separated by curtains drawn across the ward so as to secure privacy. The greatest comforts the colony can afford are to be found in this hospital, which in some of its arrangements exceeds the comforts of our best English hospitals. Why should we be so careless at home as not readily to adopt a system which would afford so much comfort to a very great proportion of the middle class of our kingdom?"

SAFETY OF BATHERS.

SEA BATHING is so often prescribed by physicians, that we make no apology for urging a warm protest against the inconveniences and perils to which patients employing this remedy are too commonly exposed. To some extent local authorities and police are responsible for the evils of which we complain; in respect to other matters the proprietors of bathing-machines are answerable. Wondrous carelessness would seem to attend the selection of suitable points of a beach for bathing-places. It is seldom the need of a firm footing at all states of the tide is considered. Even when a very little effort would suffice for the attainment of this condition, it is neglected. In consequence of the omission it happens that bathers, perhaps scarcely able to contend against the strength of the shore waves even in fine weather, are left to struggle into and out of the water, and at some period of the bathing process are nearly sure to be knocked down and bruised, if not injured. Accidents of this class, annoying, if not serious, are of almost daily occurrence at some of the principal watering-places. Where this evil is not rife, it generally happens that the bather has to walk a considerable distance over the sand, exposed to the wind, before he enters the water or can regain the machine. There are, however, greater grievances than these, although the evils of accident to limb, and cold, are not contemptible. Even where the shore-currents run strong, it is very exceptional to find a boat stationed off the bathing-place for the protection of those who may incautiously wander out of their depth or be paralysed by cold or cramp while in the water. This is an inexcusable omission, considering the frequent and urgent remonstrances which have been addressed to those responsible for employing the precaution. The matter clearly falls within the duty of authorities who license machines and regulate the beach. The subject calls for instant notice, and we must confess our inability to understand how it comes to pass that it is so generally disregarded. There ought to be no bathing stations without this safeguard. The provision should be a primary condition of the concession to ply for hire with bathing-machines. It is one of the marvels of the age that obvious precautions, easily taken against patent sources of danger to life and health, are persistently neglected. The many lamentable "accidents" occurring, and which illustrate the folly of this indifference to duty, have apparently no salutary effect.

NAUTICO-MEDICAL NOTES.

A SET of Parliamentary papers relating to our colonial possessions has been recently published, one of which shows how little care, in many cases, is taken as to the health, and hence the safety, of crews. Dr. Watts, colonial surgeon at the Falkland Islands, reported to Governor Callaghan, in July of last year, the case of the British ship *St. Elmo*, which arrived with nineteen of her crew suffering severely from lead colic. On examination it appeared that the pipe leading from the water-tanks to the deck had been repaired several times with red and white lead, thus poisoning the water for cooking as well as for ordinary drinking purposes. The symptoms were those of ordinary lead-poisoning, but were so severe that in some cases the paralysis of both hands and feet lasted for upwards of eight months. One of these men found his way to the Seamen's Hospital at Greenwich.

The other case recorded is that of the *Crown Prince*, belonging to St. John's, New Brunswick, which arrived at Stanley, the capital of the colony, on the 5th of December last, having lost six seamen, the rest being greatly prostrated. It appeared that the crew had been poisoned by putrid pork, which was supposed to have been procured at Callao. An examination of the remainder showed that it was totally unfit for human food, and the odour was sufficiently indicative of its condition. Nausea, vomiting, colic, diarrhœa, and prostration were the symptoms exhibited, followed in the six fatal cases by delirium. It is astonishing that men could, or would, eat such stinking stuff, as it appears that other meat existed on board, and that the captain stopped the supply from the bad casks when the sickness commenced. The idea that a guano cargo may have had something to do with the outbreak is, from all practical experiences, untenable, as the crews of guano ships usually arrive in this country, even after a long passage, in an exceptionally healthy condition. But the increase of steamships now compels many owners of sailing vessels to cut down expenses in every possible way, and to buy, among other things, old and condemned stores for crews' rations. In several recent outbreaks of scurvy that have been officially investigated by the inspectors of the Board of Trade, the quality of the meat issued has been found very inferior, and almost unfit for consumption.

THE mortality of London last week was at the rate of 17·4 per 1000 per annum, a slight decline on that of the previous week. Of the 1179 deaths, 10 were due to small-pox, 22 to measles, 30 to scarlet fever, 8 to diphtheria, 18 to whooping-cough, 31 to different forms of fever, and 71 to diarrhœa; these seven principal zymotic diseases thus accounting for 190 deaths (against 226 in the week immediately preceding), a number less by 103 than that of the corrected average of the fatality from the same diseases in the corresponding period of the last ten years. The births during last week numbered 2286, being 71 less than the average.

THE congress of the Sanitary Institute at Leamington will be opened on October 3rd, by Dr. Richardson, F.R.S. The exhibition in connexion with the congress will be opened on the same day by the Mayor of Leamington, when Councillor Lawson Tait, F.R.C.S., will give an account of the work of the Interception Sub-committee of the Birmingham Corporation, illustrated by working models of plan. The chairman and medical officer of the Health Committee, Manchester, and a large number of representatives of boroughs and local boards, have sent in their names as intending to be present and to take part in the congress.

IT is gratifying to note the growing appreciation by municipal bodies of the great importance to the dwellers in crowded towns of easy access to parks and open spaces. Thus at a special meeting of the Wolverhampton Town Council last week it was resolved by a large majority to lease fifty acres of the race-course for the purpose of a people's park, at a rental of £300 per annum, the Corporation having the right of purchase at £400 an acre at the expiration of the lease.

OUR readers will see with interest in our columns the case of farcy recently under the care of Dr. Dickinson in St. George's Hospital, and kindly reported to us by Dr. Owen. Such cases in the human subject are so rarely reported as to give much value to the careful details of the present case, both clinical and pathological.

The *Shipping Gazette* reports that the *Andaluza*, of Glasgow, arrived at Falmouth last week with cases of scurvy on board, and that the Board of Trade have ordered an official inquiry to be made as to the cause of the outbreak.

WE announced a week or two ago that Mr. Bolas had succeeded Mr. Hooker as Demonstrator of Chemistry in Charing-cross Hospital. We are now informed that it is Mr. Hooker who has succeeded Mr. Bolas.

NOTES OF A POST-MORTEM EXAMINATION ON THE BODY OF HARRIET STAUNTON, AGED THIRTY-FIVE

AT 34, FORBES-ROAD, PENGE, KENT, ON THURSDAY, APRIL 19TH, 1877, AT 12 NOON.

Death took place on Friday, April 13th, at 1.15 p.m.
(Delayed from unavoidable causes.)

PRESENT: Dr. Wilkinson, Dr. Longrigg, Mr. Pickell, Mr. Lister (Croydon), Dr. Bright, and Mr. Harman (Brixton). Police-sergeant in charge of Horne [Sergeant Bateman], and assistant for Dr. Longrigg.—Weather fine and dry. Wind from east, cool; from date of death to Sunday evening [April 15th], mild and very warm for season; from Sunday to day of post-mortem, cold, raw, and dry. Body that of a female forty—fifty years old, much emaciated; skin, especially of abdomen, dry and harsh, very dirty, filthy; hair full of pediculi; thighs dirty, shrunk, and skin very dry; excoriation on left labium vaginæ; some œdema of left ankle, ecchymoses on both ankles and legs; feet very dirty and very dry, "horny" skin; post-mortem ecchymoses on both hips and arms; post-mortem congestion and redness over muscles of back; marks of blister at back of neck; petechiæ over chest and abdomen; eyes sunk, closed, conjunctiva not injected; mouth open, dilated, containing food at back; tongue coated with thick dry fur. Appearance of face that of a person much older than age stated.—Breasts: Small and flaccid. No appearance of areola, nipples small and not prominent.—Abdomen: Shrunk. No linea albicantes, or streaks whatever; no brown line from the umbilicus to pubes, or appearance of any previous distension. Measurement from vertex to heel of foot, 5 feet 5½ inches; weight, with rope, 76 lb., without, 74 lb. (5st. 4lb.); weight [as stated by mother, about two years and a half previously, 8st. 7lb., or 8st. 9lb. (i.e., 119lb. or 121lb.) Normal weight of woman 5ft. 5in., 9st. 10lb.]—Hair: False, covered with lice, cut off and thrown into fireplace.—Head: No external appearance of wounds or violence. On removal of skull-cup adhesions were found between this and the dura mater and arachnoid or fibrous [and serous] membranes enclosing the brain, and between this last and the pia mater (or internal membrane of the brain itself) showing the existence of previous inflammation, but there was no appearance of any recent inflammation, such as lymph or effusion into ventricles or cavities of brain. [History of a fall downstairs when a child.] There were some small patches of rough millet-seed like deposit in the meshes of the pia mater, probably tubercular. There was well marked and universal congestion of all the external bloodvessels, of the membranes, of the sinuses, and also of the internal vessels of the skull, especially of the [longitudinal and lateral sinuses—i.e., the bloodvessels appeared as if injected].—Brain: Firm, healthy, and remarkably well preserved; well marked congestion of both external and internal surface; but no effusion into the ventricles, and no external signs of disease. Brain-substance firm, and distinction between white and grey matter well marked. Puncta cruenta well marked and numerous. No evidence of caries or necrosis of bones of skull.—Thorax: No external signs of violence; on removal of sternum, no adhesions between the pleura and lungs; surface of lungs dark, with ecchymoses on surface.—Pericardium (*or lining membrane of heart*) contained about 1 oz. of fluid, but *not adherent* to surface of heart.—Heart small, contracted; coronary vessels much congested, giving the appearance of being injected; weight 7¾ oz. (average weight 9 oz.) Both auricles and ventricles empty and contracted. No trace of any valvular disease.—Lungs: General appearance healthy; universally free from disease except at left apex, where a small patch, about 1½ in. to 2 in. square, contained tubercular deposit (grey and hepatised); congestion of base of each lung, *post mortem*, but no evidence of pneumonic or any other disease of lungs general or special.—Liver: Very small, healthy-looking, smooth, no adhesions; no evidence of hepatitis or cirrhosis; weight 2 lb. 2¾ oz. (or 34½ oz.) Average 53–6oz. (Aitken).—Gall-bladder full, containing no gall-stones.—Spleen small and congested; weight 4½ oz. Average 6–13 oz.—Kidneys healthy, no adhesions, smooth; distinction between cortical and tubular structures well marked; no evidence of disease; weight—right, 3¾ oz.; left, 4 oz. Average 10–3 oz.—Bladder healthy; contained about 3 oz. of urine.—Uterus: Weight 1½ oz., length 2½ in., breadth [at fundus] 1¾ in.; internal surface congested; *os* uteri patulous; muco-gelatinous fluid exuding. Vagina much congested throughout, especially at the upper end; vulva excoriated, especially the left labium.—The stomach contained food undigested, in which could be recognised egg and bread, and grey fluid [and since meat.] There was very marked and intense congestion of the internal lining, especially along the upper curvature. This congestion was remarkable and quite unlike that of ordinary post-mortem congestion.—The intestines, both small and large, were quite empty and contained no food or fæcal matter whatever. The duodenum was much congested throughout the whole of its upper part. The omentum was shrunk and contracted; it contained no fat, and no fat whatever surrounded the intestines, or any other organ—e.g., heart, kidneys. The rectum was much congested during the last four inches, and presented

a striking contrast to the bowels above the sigmoid flexure, the membrane of which was pale and exsanguine.

The stomach, with its contents, and the intestines, were removed carefully and placed by themselves in one jar for analysis. The liver was placed in a second jar; the uterus and ovaries in a third jar.

Note.—The words or figures within brackets were not in the original notes. They are added either in explanation of other phrases, or, as in the case of *average* weights, &c., as *memoranda*, instead of writing these separately. The actual weights and measurements of the different organs are those to which *all the medical men present assented* and *witnessed*.

Correspondence.

"Audi alteram partem."

LAW IN MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—In all the courses of instruction and examination which qualify a man for general practice with which I am acquainted, there is one subject which receives no mention. Yet it is one in which a practitioner should be informed, that he may efficiently advise in contingencies which occur in the course of practice. This subject is the law—so far as it relates to medical administration—of which the greater number of practitioners know nothing. Doubtless there are but few who have not, at one time or another, felt themselves at a loss in advising upon registration of birth or death, or the mode of dealing with an infectious disease, without incurring liability under the Public Health Act.

Though ignorance of the law is no excuse for an individual offence, it is but reasonable that the public should look to the medical practitioner for advice on the laws which concern his profession. For the guidance and protection of the public, practitioners should be conversant with the Registration and Public Health Acts—the latter especially; for under either may they lead those whom they advise into difficulties. Instances of misdirection by practitioners will have occurred to most medical officers of health, such as in the "exposure of infected persons and things" (L. P. H. A., § 126), and in the "removal of dead body to mortuary" (§ 142). When, in due course, a system of registering infectious diseases is established, another responsibility will fall to the practitioner in having to advise so that the law may not be transgressed.

For the further protection and better information of the practitioner, a general knowledge of the Medical Act, the Poor-law administration, and Coroner's law, is desirable. Under unusual circumstances it would indicate a course of procedure which would otherwise be found embarrassing, and give confidence in an opinion which might be otherwise uncertainly formed.

To the usual course of lectures on medical jurisprudence a few lectures on the enactments indicated might be added. Laws for the protection of life and health are now being yearly multiplied. The time has come when cognisance should be taken of these measures in the medical schools, and perhaps also by the examining boards. Medical jurisprudence, as at present taught, relates mainly to criminal law, with which happily we are but rarely concerned. The extension of this teaching as proposed is to direct it to what is of daily moment, and a significant element in the welfare of our country—I am, Sir, yours faithfully,

J. LLOYD ROBERTS,
Medical Officer of Health.

Denbigh, Sept. 24th, 1877.

CONSULTATIONS WITH HOMŒOPATHISTS.

To the Editor of THE LANCET.

SIR,—With reference to the courteous remarks in your last impression, regarding the late congress of homœopathists at Liverpool, and your observation that it was difficult to conceive how consultations could take place between the members of two bodies holding opposite views in medicine, will you permit me, from my own experience, to explain how this matter stands.

During the last twenty-five years I have had occasion frequently to seek the aid of experts and specialists in various forms of disease, medical and surgical. Occasionally my solicitations for assistance have been rejected, but generally my overtures have been courteously received. It has been my practice to solicit assistance simply as a doctor of medicine, standing on an equality with the general body of the profession. Sometimes no questions have been asked, but at other times the physician or surgeon has replied to my letter asking for an appointment, "Are you not a homœopathist?" My reply has been, "I do not desire to call myself a homœopathist. I am a doctor of medicine, availing myself of every known means of cure, including the application of the law of similars"; and on giving this explanation, my overtures have been generally accepted. I have never experienced any of those difficulties to which you allude, as to the possibility of consultations between those holding opposite views; and it is easy to explain how this is.

First. Consultations are sought regarding surgical interference. There, of course, the difference of view as to the administration of drugs has almost no place.

Second. Consultations are sought for diagnosis and prognosis. Here again theories of drug action have little or no place.

Third. Consultations are sought in cases apparently hopeless, for the satisfaction of the friends of the dying patient; and here again drug theories hold little or no place.

Fourth and lastly. Consultations are sought when the practitioner, finding he has exhausted his appliances in vain, seeks further information from the specialist, hoping to discover some resource of which he may be ignorant. In cases of this kind one practically admits that his system has failed, and expresses himself as only too happy if he can receive any instruction from another source.

In such cases I have readily agreed to try any suggestion, provided it was not merely an experiment which, if it failed, might injure the patient.

I am, therefore, entitled to say from my experience, that beyond a certain degree of shyness which accompanies the meeting of any two men in consultation whose views are not in perfect accord, I have found no difficulty, but much good, in meeting in consultation many of the first men in the profession, and I am certain that a more frequent professional intercourse between men of different minds would result in material advantage to all parties.

Yours truly,

GEORGE WYLD, M.D.

Great Cumberland-place, Sept. 24th, 1877.

*** Dr. Wyld does not seem to comprehend that he now stands in a position widely different from that which the great body of so-called homœopathists occupy. In the first place, he has publicly expressed his desire to repudiate the name of homœopathist, and, secondly, he has alleged that he does not confine himself to the practice of homœopathic doctrines. Under such circumstances he may fairly contend that he cannot logically be placed in the same category as those who really or professedly follow the strange teachings of Hahnemann, and whose faith in the infallibility of the law of similars is still unbroken. But he has fallen into the error of imagining that by this renunciation of homœopathy on his part he has made atonement for the bigotry and credulity of his quondam colleagues. Until the homœopathic sect as a whole makes a recantation similar to that of Dr. Wyld consultations between non-homœopathists and homœopathists must be discountenanced as useless and degrading.—ED. L.

POST-PARTUM HÆMORRHAGE.

To the Editor of THE LANCET.

SIR,—I have very great pleasure in bringing to the notice of the medical profession, through your columns, a little invention—if it is sufficiently original to be so designated—of my own, whereby we may always have at hand a remedy which is usually unattainable when most wanted: I allude to the perchloride of iron. I suppose ninety-nine

practitioners out of a hundred carry to every case of midwifery ergot in some form or preparation, but not one in a thousand carry the perchloride, one being so frequently, the other so seldom, wanted. The one we have always time to send for, but the patient has probably flooded to death before the other can be obtained. As an instance in point I may refer to the case of a patient, reported by Dr. Brisbane in THE LANCET of 25th ultimo, whose life, as he said, would probably have been saved had the drug been at hand. The plan that I have devised is so simple that it is curious it has not been before adopted. We all of us wear watch chains to which we usually append a locket or key, &c. In the locket carry a little block of the perchloride of iron, and you have by night and day the drug ready at hand; all that is required is to open the charm, take out the drug, and dissolve in a saucerful of brandy, or in pure water, the one being the tincture, the other the liquor. The remedy may hang at your watch-chain for any length of time without alteration. The locket, made according to my design, can be obtained from Messrs. Weiss and Son, in electro-silver or gold, to hold sufficient iron to make a quarter or half a pint or more of the tincture.

I remain, Sir, yours truly,

Lee, S.E., Sept. 25th. CHAS. CHITTENDEN.

M. BUISSON'S REMEDY FOR HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—As you have no less than four cases of hydrophobia in this week's LANCET, I send you an extract from an old journal that I copied out some years ago. I intended to have sent it some time ago, but for various reasons have delayed. I leave it to yourself to judge of the merits of this mode of treatment, and remain

Yours, &c.,

L.R.C.S. & P. EDIN.

Egham-hill, Surrey, September 24th, 1877.

P.S. The extract is in my diary, and therefore it is as terse as possible.

"*Buisson's Cure for Hydrophobia.*—M. Buisson, of Paris, was inoculated by hydrophobia virus whilst attending a patient who was affected. He felt all the symptoms of the disease, constriction of the pharyngeal muscles, &c. He entered a Russian vapour bath, 107° Fahr., resolving to terminate his life by suicide. To his astonishment the symptoms gradually vanished, and he in time completely recovered. Since then he has treated eighty cases successfully. His mode of treatment is this: The person bitten should take a certain number of vapour baths, and every night should induce a violent perspiration by wrapping in flannels and lying under a feather bed, and by drinking freely of warm decoction of sarsaparilla. So convinced is he of this mode of treatment proving successful that he will suffer himself to be inoculated with the virus. Dancing is also recommended to produce sweating. Animals which do not perspire—as dogs, wolves, and foxes—are most frequently affected with hydrophobia. Dancing was an old remedy for the cure of tarantula stings."

SANITATION ON THE RHINE.

(*From our Special Correspondent.*)

WHEN Byron wrote of the "valley of sweet waters," sanitary science was in its infancy. The waves of the "exulting and abounding river" may not, perhaps, prove so unquestionably

> "a blessing as they flow
> Through banks whose beauty would endure for ever,
> Could man but leave thy bright creation so."

The mischief to which Byron alludes—the stain of the thousand battles that have assailed its banks—has been effectively washed away, but not, alas! by so "clear a stream" as the bard rapturously described. The pureness of the Rhine water is, in fact, so very doubtful, that even the German Legislature has been moved by the innumerable complaints which have been made, and regulations recalling in a mild manner our own Rivers' Pollution Act have been issued. With the ignorance and indifference to consequences which so often characterise small local administrations, a large number of towns have imagined that the great sewage difficulty was solved if they succeeded in pouring all objectionable matter into the majestic river. Even in this short-sighted policy they have, however, been eminently unsuccessful. It might be argued that if by sacrificing the river, by rendering its waters corrupt and poisonous for many miles beyond each large town, cleanliness and good drainage could be secured, the advantages would be greater than the evil; but let the tourist tarry in the streets of Bonn, Coblentz, or Bingen, and he will at once painfully realise that if these towns pollute the Rhine, they are not themselves free from effluvia of the most objectionable and dangerous character. Cologne, it is true, has benefited by the hard abuse lavished upon it as "the city of stinks." It still retains a few unwholesome odours, especially in its back streets, but it is not worse in this respect than, for instance, Paris; while it is as a garden of flowers when compared to Coblentz and Bonn.

The sanitary authorities of Cologne have, in fact, displayed creditable activity; and, if there are many faults to be found with this town, I must, at least, record that the Germans with whom I discussed this matter were well aware of their own deficiencies, and displayed a sincere desire to achieve whatever improvements were practicable. In this I found an agreeable contrast to my experience when making similar inquiries in France. In those branches of sanitation which relate to disinfection after zymotic diseases, to the water-supply and the sewerage of towns, the Germans seem more advanced than the French; and they, in any case, possess that essential element of success, the frankness to recognise their own shortcomings, and the desire to learn what others have done. According to the information kindly given to me by Dr. Sticker, one of the medical officers of health of Cologne, the water drunk in that town is of excellent quality. The death-rate of Cologne is, however, still very high, amounting, according to rather doubtful statistics, to 33·7 in the thousand during the last week in August; and I regretted, with such figures before me, that I was unable to stop long enough in the town to ascertain with some degree of certainty the chief causes of this disgraceful state of affairs. I may, however, make bold, even after a very superficial inquiry, to ascribe this high death-rate to poverty and improper ventilation and drainage. The drainage of the houses varies considerably. Some houses have closets without traps or water; others, on the contrary, have proper English waterclosets, with constant supply of water. This is the case in some of the principal hotels, and notably at the Hotel du Nord, one of the largest hotels in Germany. Nevertheless, I am glad to record that during the cholera epidemic, the closets in all the hotels, from the highest to the lowest, were disinfected every week by the police. No consideration for wealth or position prevented the execution of this duty, and the police wisely refused to entrust the task to the hotel proprietors. For seats situated over middens or pits a somewhat elaborate system of disinfection was adopted. About a pound of sulphate of iron was dissolved in a pail of water; a plank was then introduced through the aperture, and the solution allowed to run slowly down the plank. Thus it was possible to direct the liquid to all parts of the midden, so that the whole of its contents were thoroughly covered with the disinfecting fluid. As much as an hour was sometimes devoted to purifying a single closet, and this operation was repeated every week during the epidemic. Under the direction of the twelve medical officers of health who watch over Cologne, carbolic acid was given to wash infected linen on the premises where a zymotic disease had occurred, and it was not permissible to send such linen to a laundry during an epidemic. The beds also were burnt, and the police provided new beds gratuitously to indigent families.

In ordinary times, however, but few precautions of this description are taken. Middens must be disinfected by the above system before they are emptied. New houses must receive their water from the water-works; and thus the water from wells, all more or less contaminated, is no longer drunk to so great an extent. Deaths from small-pox, cholera, typhus, trichina, and hydrophobia, must be reported immediately to the police by the practitioner attending,

neglect in this respect being punished by a fine of five thalers; but after cases of enteric fever, scarlet fever, diphtheria, croup, &c., no special measures are taken unless a serious epidemic occurs. At the present moment there is a slight epidemic of diphtheria, which I traced from Cologne to Bonn, and which the German authorities are contemplating with unmoved stolidity. Perhaps when it has gained a complete hold of all the towns on the Rhine, and killed a few wealthy visitors, measures will be taken to check its further development. So general is the practice of locking the stable-door after the horse has been stolen!

Obituary.

CHARLES MAYO, M.D.

IT is with very great regret that we have to record the death of this accomplished member of our profession, which occurred at sea on the 15th of July, a few hours' sail from Fiji. The career of Dr. Mayo was almost unprecedentedly active and varied. He was educated at Winchester, and was subsequently a student at St. Bartholomew's and Vienna, took his degree at Oxford and Dublin, and afterwards obtained a Fellowship at New College. After a brief period of official work at St. Bartholomew's, he joined the Northern army during the American war, and saw a great deal of active service at Vicksburg. He did excellent work during the Franco-Prussian War in organising the Darmstadt hospital established by the Princess Alice, and was specially consulted by her Royal Highness on several occasions with reference to the arrangements. Soon after the war at Acheen broke out, Mayo sought for and obtained an appointment with the Dutch, and served during the greater part of the campaign, a description of which from his pen appeared in the columns of *The Times* on several occasions. But he was not yet content with travel, and when Sir A. Gordon was appointed Governor of Fiji, Lord Carnarvon gave Mayo the post of surgeon to the new colony, on the staff of the Governor. We all know that as health officer at Fiji he had plenty of work to do. Special particulars as to his untimely end have not yet reached us, but he appears to have suffered for some time with dysentery, and to have died at the commencement of a voyage which, it was hoped, would restore him to health. Dr. Mayo was the author of several interesting sketches of travel, and was in the best sense of the term a scholarly and accomplished man. His fund of information was varied and always increasing, and it was of an eminently useful kind. He has died, unhappily, in the prime of life. He gave us in energy, activity, skill, and geniality, the type of man we should like to see more of in the ranks of the profession.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine and received certificates to practise on Sept. 20th:—

Davidson, Alex. Deas, Erith, Kent.
Hornsby, George Harcourt, Bromsgrove.
Macdonald, H. Murray Wylde, Madras, East Indies.
Newman, Arthur Joshua, Southwick-street.
Prior, Edward Thurlow, Talbot-square.
Taylor, Frank, Stoke Croft, Bristol.
Weston, Edwin, Madras, East Indies.

The following gentlemen also passed the Primary Professional Examination:—

Ebenezer Wenham Alden, Middlesex Hospital; James Graham Jeffreys, St. Thomas's Hospital.

CHOLERA has, by last advices, been very prevalent at Amoy.

THE Metropolitan Asylums Board have closed the newly erected Small-pox Hospital at Hatcham, near Deptford.

DR. ROBERT TEMPLE WRIGHT is a candidate for the coronership of the district of North Bradford, Salop, vacant by the resignation of Dr. Gill.

YELLOW FEVER is very severe at Vera Cruz and Havana, and arrivals from the latter port at New York are quarantined or very closely examined.

VACCINATION GRANTS.—Dr. W. J. Clegg, of Bacup, has received a grant of £16 1s. for efficient vaccination in his district.—Mr. Edmund W. Parkinson, Melbourn district of the Royston Union, has received £3 18s.

HOSPITAL SATURDAY FUND.—The amount collected in the boxes placed in the streets and large establishments of London on Hospital Saturday was £835, being a slight increase on the sum realised in the same way last year. Of this amount £685 12s. 5d. was contained in the boxes lodged at Messrs. Hoare's bank up to 11 30, and was made up as follows:—Gold £60, silver £461 18s. 5d., copper £163 14s.; the boxes placed on the steamboats brought in £31 17s.; those kindly put by Messrs. Spiers & Pond on the counters of their various establishments realised £26 13s. 6d.; and at Mr. Faulkner's lavatories £1 10s. 11d.; the remainder was made up in boxes at Covent Garden Theatre, Holborn Restaurant, sundry hospitals, &c.

Medical Appointments.

ATKINSON, J., L.R.C.S.I., L.K.Q.C.P.I., & L.M., has been appointed Medical Officer &c. for the Killala Dispensary District of the Killala Union, co. Mayo, vice Handy, deceased.

BARTLETT, J., L.R.C.P.Ed., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Holworth District of the Blandford Union and the Owermoigne District of the Weymouth Union, vice Sterling, resigned; and for the Winfrith District of the Wareham and Purbeck Union, vice Boreham, resigned.

BOROUGH, F., M.R.C.S.E., has been appointed a Medical Officer to the Derby and Derbyshire Hospital for Sick Children.

BROCK, A. C., M.R.C.S.E., L.R.C.P.I., has been appointed Physician's Assistant to the General Hospital, Bristol, vice Seward, resigned.

BUCHAN, G., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Kilmaurs, Ayrshire, vice Wilson, resigned.

BUCKLY, D. F., L.K.Q.C.P.I., L.R.C.P.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Granard Dispensary District of the Granard Union, vice Yorke, deceased.

CLARKE, F. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 6 District of the Bury St. Edmunds Incorporation of the Poor, vice Hinnell, resigned.

COPESTAKE, W. G., M.R.C.S.E., has been appointed a Medical Officer to the Derby and Derbyshire Hospital for Sick Children.

COUSINS, J. S., L.R.C.P.Ed., L.R.C.S.Ed., L.S.A.L., has been reappointed Medical Officer of Health for the Llanvrechva Upper Urban Sanitary District till the 24th of June next.

DAVIES, W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 1 District of the Cardigan Union, vice Noott, resigned.

DENBY, T. C., M.R.C.S.E., L.S.A.L., has been appointed an Assistant-Surgeon to the Eye and Ear Hospital, Bradford, Yorkshire, vice Rabagliati, resigned.

DRINKWATER, H., M.B., C.M., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Bishopwearmouth West District of the Sunderland Union, vice Shaw, deceased.

EDWARDES, E. J., M.B., L.R.C.S.Ed., L.S.A.L., has been appointed Medical Officer for the Workhouse, and Medical Officer and Public Vaccinator for the Llanfyllin District, of the Llanfyllin Union, and Medical Officer of Health for the Llanfyllin Sub-district of the Llanfyllin Rural Sanitary District, all vice Williams, resigned.

EKENS, J. W., L.R.C.S.Ed., L.S.A.L., has been appointed Medical Officer for the No. 2 District of the Alresford Union, vice Lawrence, resigned.

FIELDEN, S., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of Health for the Shildon and East Thickley Urban Sanitary District.

GOODE, H., M.B., M.R.C.S.E., has been appointed a Medical Officer to the Derby and Derbyshire Hospital for Sick Children.

GORST, H., M.R.C.S.E., L.R.C.P.L., has been appointed an Assistant House-Surgeon to the Liverpool Dispensaries.

GREAVES, C. A., M.B., M.R.C.S.E., has been appointed a Medical Officer to the Derby and Derbyshire Hospital for Sick Children.

HITCHINS, C. V., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Weston-super-Mare Urban Sanitary District, at £45 for one year.

LAMB, J., M.R.C.S.E., has been appointed Medical Officer to the Birkenhead Post-office, vice Macdougall, deceased.

LEWIS, T. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 1 District and the Workhouse of the Carmarthen Union, and Medical Officer of Health for the No. 1 Sub-district of the Carmarthen Rural Sanitary District, vice Lloyd, deceased.

LIMRICK, O. E. B., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed an Assistant House-Surgeon to the Liverpool Dispensaries.

MACKENZIE, S., M.D., M.R.C.P.L., has been appointed Examining Physician to the London Orphan Asylum, vice Woodman, deceased.

MONCKTON, D. H., M.D., F.R.C.S.E., L.S.A., of Rugeley, has been appointed Medical Officer of Health to the Rural Sanitary Authority of the Lichfield Union, vice McCully, whose appointment has expired.

SLEVIN, P. J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Granard Union Workhouse, vice Yorke, deceased.

THOMSON, J. A. M., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Certifying Factory Surgeon for the District of Newport, Salop.

WARBURTON, C. W., L.R.C.P.Ed. & L.M., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Wybunbury District of the Nantwich Union, Cheshire, vice Bellyse, deceased.

WILLIAMS, F., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Launceston Rural Sanitary District, and his salary increased from £30 to £50 per annum.

WILSON, E. M., M.R.C.S., has been appointed a House-Surgeon to the West London Hospital, Hammersmith, vice Cumming, resigned.

WRIGHT, F. W., M.R.C.S.E., has been appointed a Medical Officer to the Derby and Derbyshire Hospital for Sick Children.

Births, Marriages, and Deaths.

BIRTHS.

ALLEN.—On the 15th inst., the wife of Dr. Allen, of Hastings, of a son.

FERGUSON.—On the 20th inst., at Stephen's-green East, Dublin, the wife of Robert Ferguson, M.D., of a daughter.

HEATHER.—On the 14th inst., at Seapoint, co. Dublin, the wife of D. C. W. Heather, L.K.Q.C.P.I., Surgeon, Army, of a daughter.

PERIGAL.—On the 14th inst., at Nairn, the wife of Arthur Perigal, M.D., of a daughter.

SKIMMING.—On the 20th inst., at East Molesey, the wife of Robert Skimming, M.D., of a daughter.

MARRIAGES.

BOSSON—BRADSHAW.—On the 13th inst., at Hogsthorpe, Lincolnshire, by the Rev. H. F. Benwell, Vicar, George Bosson, M.R.C.S. &c., of Alford, to Maria Mary, eldest daughter of R. Bradshaw, Esq., of Hogsthorpe Rectory.

FOULIS—FRASER.—On the 19th inst., at St. George's Episcopal Church, Edinburgh, James Foulis, M.D., to Henrietta Baird, daughter of W. N. Fraser, Esq.

HART—BURT.—On the 20th inst., at the Parish Church, Harborne, George Henry Hart, M.R.C.S.E., to Mary Louisa, daughter of Major Burt.

MARSHALL—PRYN.—On the 20th inst., at the Parish Church of St. Stephen's-by-Saltash, Cornwall, by the Rev. E. Polwhele, M.A., Rector of Pelliton, assisted by the Rev. H. A. Noel, Vicar of the Parish, John Marshall, M.R.C.S.E., of Bermondsey, to Amy Maria, only daughter of W. Pryn, Esq., of Tredown, St. Stephen's-by-Saltash.

PRITCHARD—WATSON.—On the 15th inst., at St. Andrew's Church, Shilton, by the Rev. C. C. Adams, M.A., Ernest James Pritchard, M.B., C.M., L.S.A.L., to Eleanor (Nellie), youngest daughter of the late John Watson, Esq., of Walsgrave-on-Lowe.

DEATHS.

ALLEN.—On the 21st inst., after a long trying illness, A. B. de Lisle Allen, M.R.C.S.E., L.R.C.P.Ed., of Sutherland-gardens, aged 60, deeply lamented.

ARDEN.—On the 21st inst., at Glossop-road, Sheffield, Septimus Arden, M.R.C.S.E., aged 55.

BENNETT.—On the 19th inst., at Cheltenham, Francis I'on Bennett, L.R.C.P.Ed., aged 41.

BENNETT.—On the 20th inst., of bronchitis and Bright's disease, William George Bennett, L.D.S., of George-street, Hanover-square, aged 56.

BRIDGE.—On the 12th inst., at Old Court, Wellington, Stephen F. Bridge, F.R.C.S.E., aged 87.

BURY.—On the 15th inst., at Richmond-hill, Bray, George Bury, M.R.C.S.E., aged 67.

CHARLTON.—On the 10th inst., at Town Mills, Tonbridge, Egbert Charlton, M.D., aged 40.

FLETCHER.—On the 24th inst., at Broxbourne, Dr. Fletcher, formerly of Bromsgrove, aged 66.

GERRANS.—On the 21st inst., at Wyndham-place, Bryanston-square, James George Genee Gerrans, M.R.C.S.E., aged 83.

GRANT.—On the 25th inst., at Park-street, London, Mary Anne, the beloved wife of Surgeon-General J. M. Grant, aged 59.

HUGHES.—On the 10th inst., at Ipswich, George Whimper Hughes, M.R.C.S.E.

STORY.—On the 17th inst., at Blenheim-street, Newcastle-on-Tyne, Michael Marshall Story, M.R.C.S.E., aged 42.

TANNER.—On the 11th inst., lost in the ship *Ardlussche* off Portland, Robert Tanner, M.D., of Ledbury, aged 39.

WALTER.—On the 24th inst., John Walter, M.R.C.S.E., of Dover.

WHITTLE.—On the 20th inst., at Islington, Liverpool, Alfred Whittle, M.D., aged 54.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. A. Carpenter on Preventive Medicine in Relation to the Public Health.
The American Practitioner. July and August.
Dr. W. A. Miller: Elements of Chemistry.
Dr. Peacock on Valvular Disease of the Heart.
Dr. F. R. Hogg on Health and Ailments of European Families in India.
Dublin Journal of Medical Science.
H. Watts: Fownes' Organic Chemistry.
G. Vasey: The Philosophy of Laughter and Smiling.
Messrs. S. W. Silver and Co.'s Transvaal.
G. Nevile: Horses and Riding.
R. Moreton: Horse-breaking.
Colburn's New Monthly Magazine. September.
T. B. Sprague: Does Vaccination afford any Protection against Small-pox?
Dr. M. Charteris: Practice of Medicine.
The Sunday at Home. October.
The Leisure Hour. October.

Notes, Short Comments, and Answers to Correspondents.

PROFESSIONAL MISUNDERSTANDINGS.

WE see no good to be done by publishing a correspondence which has been sent to us. The misunderstanding which it expounds—not, on either side, in a way which we can praise—originated very simply, and in a manner which can be easily understood. A member of a Club gets a note from the authorities of his Club, requiring him to be seen, and apparently to be treated, by the doctor of the Club. He sends a note to the medical man in private attendance upon the case, roughly, but not very clearly, explaining this. The private practitioner, not reading the note in this sense, calls on the patient, and finds that he has been visited by the Club doctor, who has made some remarks about treatment. Thereupon he writes, charging the Club doctor with behaviour "certainly most unprofessional, and much to be deplored"; and in a second letter he charges the attendant on the Club, by interrogation, with practising surgery illegally, without a registered surgical degree, though it so happens that the gentleman in question has the licence of the Faculty of Glasgow, which is, as we all know, a surgical qualification. In the first letter of reply from the Club surgeon there is an unfortunate sentence: "I think the less said about your treatment of the case the better for all parties." This is both apologised for and explained, the writer declaring that the provision crept in quite inadvertently, he only meaning to say that the treatment was not the question under dispute, but only that of professional courtesy. These are the whole materials of an acrimonious correspondence between two medical neighbours, one letter being returned unopened. We can see no justification for a long dispute, and certainly none for an acrimonious one, in such materials. It is natural that members of Clubs should be attended sometime or other, and sooner or later, by the Club doctor. The intimation of this in this case was given, though not quite clearly. There is no cause for serious offence, save in a sentence withdrawn and regretted, and said to have been written inadvertently. We hope yet to hear that the matter has been amicably settled.

T. R. P.—We have no experience of "damiana" as an aphrodisiac; but according to the testimony of some American physicians its virtues have been greatly overrated.

Mr. Jude.—We cannot recommend a particular practitioner.

OLD REMEDIES.

To the Editor of THE LANCET.

SIR,—In answer to the query about the "pidgeons," I beg to say that the application of animals slit open when alive, and immediately applied over the heart or stomach of a patient in *articulo mortis*, seems to have been a common practice in the seventeenth century; the idea being that the "spirits and animal moisture" passed from the victim to the patient. Dr. G. Thompson, in his "Art of Curing Chemically" (London, 1675), recommends a young whelp for the purpose; Lazarus Riverius, "Praxis Medica" (Paris, 1642), the skin of a sheep stripped off hot, and wrapped round the dying person; and, particularly, white doves split open, sprinkled with spices, and bound over the heart. Culpepper, in his "Practice of Physick" (London, 1672), which is a translation of the Praxis with many diverting additions, often mentions these cruel remedies, as well as the application of dry cupping-glasses over the heart, "to bring the spirits skipping back again"; and in the chapter on Putrid Feavers, p. 574, says: "Also to strengthen and drive out the sooty vapours and feaverish heat, young pigeons are very good, being split through the backbone, and applied to the region of the heart, which likewise are oftentimes sprinkled with cordial powders, as diamargaritum frigidum, and triasantalon."

Your obedient servant,
Ixworth, Suffolk, Sept. 17th, 1877. G. F. MASTERMAN.

Mr. G. B. Robinson.—The question is a legal and not a medical one. Our correspondent would be entitled, at the very least, to compensation for what he was out of pocket by giving up his position as locum tenens and ordering his outfit. If this and a little more were not given, with some reasonable explanation of the course of conduct, he should put the matter into the hands of a solicitor.

Impartiality.—No useful purpose would be answered by prolonging a discussion of the question involved in the recent award of the Astley Cooper Prize. Correspondents will gather our view of the method adopted from the remarks already made.

A POSSIBLE CAUSE OF MONSTROSITIES.

To the Editor of THE LANCET.

SIR,—Three days ago I attended Mrs. P—— in her confinement. She was of a highly nervous temperament, and fainted after the expulsion of the child; otherwise she was strong, and the labour a good one. The child was anideus—that is, articulating with one glenoid cavity I found a forearm and two adherent fingers; from the other, probably a carpus and thumb. The right foot was drawn inwards, and the heel upwards. Otherwise the child was healthy and well-featured. Twelve months ago I gathered that after her confinement she had ileus, and next ovarian inflammation, pain over the right ovary remaining for some weeks. Can the monstrosity be explained by supposing that by the ill-effects of the ovaritis either an imperfect ovum resulted, or possibly an ovum itself was inflamed, and next became fertilised? In support of this view I may say that a woman whom I attended once for ovaritis at Landport has, eleven months after, given birth to an epipodian.

I am, Sir, yours faithfully,
Peckham-rye, Sept. 22nd, 1877. LESLIE L. THAIN, M.R.C.S., &c.

CANNABIS INDICA IN TRAUMATIC TETANUS.

THE "Proceedings of the Medical Society of the County of Kings" (U.S.A.) publishes the report of a case, by Dr. G. A. Evans, of severe traumatic tetanus, which terminated in recovery after the administration of large doses of cannabis indica. Nitrite of amyl was previously tried, but conspicuously failed to produce any benefit; indeed its effect seemed rather to be harmful. The wound was caused by a shaft of steel tapering abruptly to a point, which entered the outer side of the middle third of the right leg. The patient was a healthy man, aged thirty-five. Tetanus markedly supervened on the twenty-third day after the receipt of the injury, and under the administration of nitrite of amyl the man was rapidly sinking, when the cannabis indica was commenced in thirty-minim doses every hour. Improvement was evident the next day. The dose was increased gradually until the large amount of 132 minims (equal to six grains of purified solid extract) every hour was reached, the patient meanwhile losing his spasms, increasing in strength, and acquiring a ravenous appetite. On the ninth day of the attack the dose was diminished to sixty minims, when an accession of clonic spasm of the cervical muscles came on, and the cannabis was increased to ninety minims, and continued for a few days, when recovery was complete. Dr. Evans draws attention—first, to the length of time which intervened between the infliction of the injury and the onset of tetanus; second, to the craving for food which was experienced by the patient during the exhibition of the cannabis indica; third, to the fact that on three occasions on which it was largely increased, manifest improvement took place, which he thinks shows that the system becomes in tetanus rapidly habituated to the presence of the drug.

MEDICAL ATTENDANCE ON CLUBS.

To the Editor of THE LANCET.

SIR,—I enclose an answer to your correspondent as regards the rate of pay for juvenile Foresters, Odd Fellows, and Druids.

There are two firms in this place, Messrs. Gould and Son, and Crook and Hayne. All our Clubs, including juveniles, pay us not less than 4*s.* 6*d.* per head per annum. All new members come to us to be examined before entering the Clubs, and each member pays us 6*d.* You see we—that is both firms—make no difference between juveniles and grown-up members. The members wished very much to force a lower price upon us; but after various meetings their good sense showed them that juveniles would require quite as much medical attendance as old members, and now they freely give us for all not less than 4*s.* 6*d.* I need not tell you that, of course, both firms worked together in this matter. Many of our Clubs of their own accord pay us 5*s.* per annum, and we hope in time to persuade all to do likewise.

Yours &c.,

Northfleet, Kent, Sept. 20th, 1877. F. G. HAYNE, M.R.C.S. Eng.

EPIDEMIC DISEASES.

THE Darlington Board of Guardians have recently had a lively discussion on this subject, and, as a result, have addressed a letter to the local sanitary authorities of the metropolis, setting forth the large mortality that occurs from preventable diseases, and suggesting the appointment of a Royal Commission to inquire into the subject. The Darlington guardians consider that it should be obligatory on all persons to report cases of infectious and contagious disease to the local authorities.

Mr. Sydney Pyne.—A medical man believing himself to be in possession of a remedy for any disease is bound in honour and humanity to communicate his real or supposed knowledge to the profession.

MR. BUCKSTON BROWNE'S TAMPON.

To the Editor of THE LANCET.

SIR,—With the diagram of Mr. Browne's tampon fresh in the minds of your readers, I would wish to call attention to a somewhat similar instrument which I instructed Messrs. Mayer and Meltzer to make for me some months ago. It is intended as a plug for the nares in cases of epistaxis, and consists of a hollow silver tube slightly curved (like a Belloc's cannula), surrounded by a thin indiarubber bag, to which is attached a small tube and stop-cock, through which the bag may be distended either with air or iced-water. The chief advantage which this tampon possesses over other and somewhat similar instruments which have long been in use, consists in the fact that, whilst ensuring an efficient plug, it enables the sufferer, with some degree of comfort, to breathe through the nostrils—an advantage which will be readily appreciated by those who have once witnessed the miserable condition of a patient with both posterior nares plugged.

Yours obediently,

Guildford, September, 1877. R. KENNEDY CASLEY, M.D.

"2, DUKE-ST., LIVERPOOL,"

Is advertised unblushingly on handbills, and in a way very demoralising, as the head-quarters of Messrs. Longest's nerve-tonic and invigorating balsam, and as that "old-established Medical Institution," conducted by a "legally qualified physician and surgeon, registered." Can the police of Liverpool not take such a matter in hand? If not, or if they are quietly acquiescing in it, can the profession not combine to expose and stop it? It would be an insult to the profession in Liverpool and to the Bench to suppose that if they earnestly resolve to do so they will fail. What has been done in Manchester can be done in Liverpool, and that it is not done is a reproach to a service which is a good deal under criticism just now.

Mr. Julius J. E. Willmott.—It would be proper to retain the fee proffered under such circumstances. The service and the circumstances were exceptional.

Nemo.—1. There is no reason for so concluding.—2. A man is certainly not justified in saying so. The statement is incorrect, and in very bad taste.

A CORONER'S WAY OF EVADING THE VACCINATION ACT.

A CORONER—also, by the way, an unqualified medical practitioner,—Mr. John Stamford Walton, one of the coroners for the North Riding of Yorkshire, has been convicted for not taking his child to be vaccinated according to the provisions of the Vaccination Acts. The magistrates of Northallerton also fined the defendant 10*s.* and costs. It is pitiable to see a coroner, and, withal, the son and brother of medical practitioners, in a position so little creditable to his intelligence and his respect for law. The defence was weak and incourageous. A certificate of insusceptibility was produced, signed by Mr. R. E. Unthank, Surgeon. The law requires that such a certificate should be signed by a public vaccinator or a private practitioner, who has himself vaccinated the child in question three times without success. Mr. Unthank was obliged to confess before the magistrates that he had not vaccinated the child, and only gave the certificate on the word of Mr. Walton, who, an unqualified practitioner, had himself vaccinated the child. Mr. Walton's brother gave evidence to the effect that he and his father, up to the time of his father's death, used to fill up vaccination certificates for the defendant. He knew that the child had been vaccinated four times in a fortnight by the defendant! It looks rather as if the coroner had wanted to comply both with the law and with his wife's wish not to have the child vaccinated. He failed, however, in getting the consent of the magistrates to such illegal courses. We cannot but regret very much that any qualified medical man should have helped Mr. Walton in such conduct.

Mr. H. F. Steele, F. F. J., and others, will find a reply to their questions on medical service at the seat of war in our number of Aug. 11th, page 227.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—In my letter on a case of abdominal distension that appeared in your issue of to-day there is an error that I shall feel obliged by your correcting. Instead of "make into eight pills," it should be "*send* eight pills." The mistake is so obvious that perhaps it scarcely needs correction; at the same time you will confer a favour on me by inserting this in your next number. The prescription, as it stands, savours of homœopathy, a system in which I am not a believer. I may add, referring to the letter of Dr. S. Clark, that my patient was not a dipsomaniac.

Yours truly,

Tenby, Sept. 22nd, 1877. DOUGLAS A. REID, M.D.

THE PLASTER-OF-PARIS SPLINT IN SPINAL CURVATURE.

THE *Lexington Press* devotes an article to the praise of Dr. Joseph Bryan as the young practitioner entitled to the honour of first treating cases of spinal curvature by suspending the patient, and then applying the plaster-of-Paris bandage; or rather it would be more accurate to say that the article is devoted to severe reflections on Dr. Lewis Sayre for, as it is alleged, appropriating Dr. Bryan's treatment after seeing it practised by Dr. Bryan in Bellvue, or, as the *Lexington Press* has it, "Bellview." Dr. Sayre is not so dependent on other men's discoveries as this would seem to imply, and we may safely hope to hear a contradiction of this history of a method of treatment which promises to be a great boon.

TREATMENT OF BURNS.

To the Editor of THE LANCET.

SIR,—In the London *Medical Gazette* for the year 1844 may be found a letter of mine to the editor, in which I described the efficacy of a saturated solution of the carbonate of soda in the relief of burns and scalds, and I believe I was the first in this country to make this now remedy known.

I am, Sir, yours obediently,

F. PEPPERCORNE, L.R.C.P. Edin., &c.

Craven-street, W.C., Sept. 22nd, 1877.

To the Editor of THE LANCET.

SIR,—Would Mr. Kiernander kindly state the *strength* of the solution of bicarbonate of soda that he generally uses for burns? What subsequent dressing does he adopt?

Yours &c.,

Sept. 25th, 1877. F.R.C.P. Edin.

THE PREVENTION OF IMMORALITY.

Mr. William H. Heaton.—We respect the motives of our correspondent. Moreover, he has stated his case and urged his remedies in as moderate a way as the subject admits of. Still we doubt the advantage of circulating such a pamphlet promiscuously. Neither does it go so deeply into the philosophy of the question, or the morality of it, as is necessary. The physiological bearings of the question want more consideration at the hands of public teachers and parents than they have received.

LOSS OF HAIR ON SCALP AFTER RHEUMATIC FEVER.

To the Editor of THE LANCET.

SIR,—Could any of your readers suggest a cure for loss of hair on scalp following rheumatic fever, and in a healthy female about thirty-five years of age? I should like to be made aware of the amount of probability of cure.

Yours &c.,

Sept. 24th, 1877. M.B., C.M.

F.R.C.S., (Dublin.)—A case was reported in the *Toledo Journal* for July, by Dr. M'Graw, of Detroit, in which ovariotomy was performed on a child aged twelve years. The patient was sexually undeveloped, and had never menstruated. The operation was undertaken four weeks after the removal, by tapping, of four gallons of coloured serum, and the child made a good recovery.

Medicus.—There would be no impropriety in doing so.

SCANT GENEROSITY.

A Qualified Assistant complains feelingly that his principal has rewarded him lately with a bonus of £1 3*s.* for a month's entire charge of a large and lucrative practice, including attendance on nine midwifery cases; the said principal having frequent vacations, and always leaving our correspondent in sole charge. We sympathise with the assistant. Of course he has no legal ground of complaint. He has got his salary, and £1 3*s.* into the bargain! But he has not got his desert. An assistant who can take charge of such a practice for a month, and attend nine midwifery cases, is not paid, much less rewarded, by such treatment. The work done was the principal's work, and very hard work too, averaging twenty-five visits daily. We can only explain such inadequate payment on the theory of inadvertence. The principal found everything proceeding so smoothly that he did not realise the merit of his locum tenens. A little remonstrance would probably convince him of his defective appreciation of service. There is no other course open to our correspondent. If this failed, he would be justified in seeking a more appreciative principal with little delay. We have often to complain of assistants. It is but just when they do their work well that we should vindicate their claims to consideration.

Discens.—Consult a respectable practitioner.

TREATMENT OF ERYSIPELAS.

To the Editor of THE LANCET.

SIR,—Can any of your numerous readers give me any information respecting the use of bromine in erysipelas? I find no mention of its use, except in the Retrospect (Braithwaite's). I have not had satisfactory results in cases of children by the use of tincture of muriate of iron. I should be glad of further information respecting the treatment of erysipelas following vaccination.

Yours faithfully,

Huddersfield, Sept. 24th, 1877. PRO BONO PUBLICO.

P. S. may refer to our number of May 26th of the present year, in which will be found some remarks on the physiological action of copper and its compounds.

Dubious.—The best course to pursue under the circumstances may be gathered by consulting our Students' Number, published on the 8th instant.

Simplex had better take the advice of a registered practitioner, and avoid advertising quacks.

ERRATUM.—In Mr. Steele's article on Hydrophobia, p. 422, first col., line 34, for "face," read *base*.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Handfield Jones, London; Mr. Arthur E. Barker, London; Dr. Savage, Birmingham; Dr. Fothergill, London; Dr. M. Mackenzie, London; Mr. Bellamy, London; Mr. Elliott, London; Mr. Brown, Northallerton; Mr. Dolan, Halifax; Mr. Fyson, London; Mr. Hayne, Northfleet; Dr. Foulis, Glasgow; Mr. Heaton, Reigate; Dr. Barnard, Geelong; Mr. Parkinson; Mr. Jude, Fairlawn; Mr. Gilmoor, Glasgow; Mr. R. Owen, London; Mr. Field, London; Dr. Reid, Tenby; Mr. Thain; Dr. Thomas, London; Mr. Peppercorne, London; Mr. Threadgale, Norwood; Dr. Monckton, Rugeley; Mr. Day, Dorchester; Dr. R. H. Lloyd, Lambeth; Mr. Orfeus, Loddon; Messrs. Weiss & Son, London; Mr. Steele, Carlisle; Dr. Knox, Mooltan; Dr. Nattrass, Sunderland; Dr. Roberts, Denbigh; Dr. Coskery, Baltimore; Mr. Morris; Mr. Porter, London; Lord Blantyre, Glasgow; Dr. Denny; Mr. Sparrow, Chichester; Dr. Wyld; Mr. Grove, Woodford; Mr. Bantock; Mr. Gorham, Yoxford; Dr. Buchanan; Mr. Unsworth; Dr. Bayes; Mr. Rees; Dr. Eberle; Mr. Cleugh; Dr. Casley, Guildford; F. F. J.; F. J. D.; Anti-Quack; Pro Bono Publico; Fair Play; Avis; Impartiality; L.R.C.S. & P. Edin.; Surgeon-Major; The Chairman of the Board of the London Hospitals; Visitor; L.R.C.P. Edinburgh; M. B.; The Secretary of the Birmingham Lying-in Charity; L. M., Lincoln; Senex; M.R.C.S., Liverpool; The Obstetrical Society of London; Alpha; An Old Officer; The Council of the Sanitary Institute; Medicus; M. C.; Chirurgus; Discens; Nemo; J. R.; A Constant Reader; A Student M.R.C.S. and L.S.A.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Humphery, New Romney; Mr. Thorp, Dobroyd; Mr. Wing, Colsterworth; Dr. Ross; Mr. Tivy, Cork; Mr. O'Sullivan, Bombay; Mr. Gusson, St. George's; Mr. Collins, Newnham; Dr. Corner; Dr. Wright, Wellingborough; Mr. Hamilton; Mr. Hutton; Mr. Cheesman; Mr. R. Jones; Mr. Derrett; Mr. Clements; Mr. Williams; Dr. Lee; Dr. Coates; Dr. Greenslade, Uttoxeter; Dr. Shaw; Dr. Axford, Southsea; X. Y. Z., Abingdon; T. P.; H.; H. K. I.; A. B., Sheffield; X. Y., Ramsgate; G. R.; M.D.; B. M. Z., Hungerford; J. F. F.; Medicus, Darlington; C. A. O.; Medicus, Manchester; A. C., Plymouth; Q. G.; Medicus, Bridlington; Carte; M. A., Cambridge; A. B. C., Welshpool; J. D. C.; M.D., Bradford; E. A. L. S., Fowey; P. G., Northampton; H. R.; J. C., Cannock; F. R. C. S.; Beta, Dolwyddelan; R. W., Dublin; Antiseptic; Medicus.

Aberystwith Observer, Cambrian News, Hornet, Rochdale Observer, Moreton Free Press, Rochdale Times, Financial Opinion, Manchester Guardian, Western Morning News, Liverpool Mercury, Macclesfield Courier, Lincoln Gazette, Brighton Daily News, Bradford Observer, Norwich Free Press, and *Hampshire Post* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, SEPT. 27TH, 1877.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Sept. 21	29·80	N.	44	47	86	57	40	0·08	Fine
,, 22	29·95	N.E.	45	48	88	57	41	0·05	Fine
,, 23	29·90	N.E.	52	55	83	57	45	0·02	Cloudy
,, 24	30·07	N.	48	53	85	58	45	...	Cloudy
,, 25	30·28	N.W.	42	45	69	57	39	...	Overcast
,, 26	30·28	N.W.	49	51	79	61	42	0·02	Overcast
,, 27	30·43	W.	46	46	68	59	43	...	Foggy

Medical Diary for the ensuing Week.

Monday, Oct. 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Oct. 2.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Oct. 3.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens by Dr. Galabin and others.—Dr. W. T. Greene: "A Synopsis of 1500 Consecutive Labours."

Thursday, Oct. 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Oct. 5.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 6.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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Agent for the Advertising Department in France—

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